





# NAVAL POSTGRADUATE SCHOOL Monterey, California



## THESIS

INTEGRATED FINANCIAL REPORTING FOR A SMALL BUSINESS

by

**Bradford Laurence Martin** 

March 1991

Thesis Advisor:

Tarek K. Abdel-Hamid

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### Integrated Financial Reporting for a Small Business

by

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from the

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#### ABSTRACT

The small business manager is faced with increasing competition on a world wide scale in today's marketplace.

Business decisions which affect planning and operations are more critical today than in the past. The manager is typically faced with making sense out of large quantities of accounting information. Decision support tools are needed to simplify this endeavor.

Electronic spreadsheets have been used extensively in accounting departments for years. Recently, electronic spreadsheets have dramatically increased in capability while decreasing in price. The objective of this thesis is to demonstrate the feasibility of using off-the-shelf spreadsheet software to develop an integrated financial reporting system for a small business.

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#### I. INTRODUCTION

#### A. BACKGROUND

Entrepreneurship is alive and well in America. As our economy becomes more tightly integrated with the world's economy, however, even the small business manager is finding that competition for scarce resources is growing keener.

Sound financial decision making, consequently, is more critical today than 20 years ago. Small business managers need quick access to structured information that will aid them in their decision making process.

The computer age has brought a wealth of new technologies to the marketplace that show promise as decision making tools. Microcomputers today are as fast and have as much storage as mainframe computers of the 1970's, providing execution speed and storage capacity essential to a decision support system that must analyze large amounts of data and respond to a rapidly business environment.

Software has also grown quickly in capability. Highly sophisticated electronic spreadsheets such as Lotus

Development Corporation's 1-2-3 can function as databases, presentation graphics generators, and analytical tools.

Macro languages provide the developer with the ability to

access these tremendous capabilities and combine them into complete application packages.

Accessing all this powerful technology requires overcoming a learning curve that is often very steep.

Although the cost of these technologies is steadily dropping, it remains significant for the small business.

Hiring an application programmer is not practical for the small business manager who may be working out of his garage. The electronic spreadsheets, therefore, need to be simple enough so that the average businessman can produce applications that store, analyze, and display data.

#### B. PURPOSE

This thesis develops the first module of an integrated decision support system that will help the small business manager to be more productive. The system is called the Small Business Decision Support System (SBDSS).

Specifically, this module integrates and automates the reporting of financial statements and business performance measures. The system provides:

- Highly <u>integrated</u> financial statements that only require one-time data entry to increase data consistency.
- Ready access to the previous 12 months of financial data and statistics.
- The ability to reproduce financial data in a report format.

- The ability to do trend analysis of financial data and to display the results of this analysis in a graphical form.
- An easy to use and intuitive menuing system.
- A high degree of self-documentation and other features to enhance maintainability and connectivity with future modules.

#### C. RESEARCH QUESTIONS

The thesis has one primary research question: Is it possible to integrate and automate the time intensive task of developing financial statements and associated plots of performance indicators? In addition, the following two questions helped guide the research:

- Is Lotus 1-2-3 Release 3.0 an effective development environment for a small business manager, who is a computer novice, to develop useful decision support tools?
- Can a system be designed to reduce redundant data entry and thus improve data consistency across highly integrated financial statements?

#### D. CHAPTER OUTLINE

This thesis has five chapters. Chapter I, Introduction, provides a background to the factors that spawned the need for this research. The purpose of the thesis and the associated research questions are described in detail.

Chapter II, Financial Reporting, explores the function, design, and interrelationships of financial reports.

Chapter III, System Architecture, provides an overview of the structure of the system. Particular emphasis is given to the menu hierarchy. Chapter IV, System Demonstration, is a user's manual to SBDSS. Chapter V, Conclusion, covers lessons learned from this research and recommendations for areas of future research.

#### II. FINANCIAL REPORTING

#### A. BACKGROUND

Webster's dictionary defines accounting as "the system of recording and summarizing business and financial transactions and analyzing, verifying, and reporting the results." [Ref. 1:p. 50] Accounting, therefore, bridges the gap between business operations and decision makers inside and outside a business entity. Accurate, highly summarized accounting information is critical to the decision making process. Making decisions is essentially a risky endeavor since the aim is often to affect future events. Highly summarized and accurate accounting information reduces the risk associated with decision making. Managers, bankers, and others thus have an insatiable appetite for such information.

The reporting function is of critical importance to any accounting system. The key is to understand what information is relevant to which decision makers and in what form is it best to communicate this information. A useful analogy is to view the reports generated by an accounting system as the gauges in the cockpit of a commercial airliner. Each gauge presents data in one form or another about the operation of the aircraft. This data is relevant

to one or more of the aircrew at various times and thus becomes information. A particular gauge may not be singularly important. Taken in sum with other gauges or compared to past information, however, the information displayed takes on greater importance. From the cockpit of their aircraft, the aircrew can determine the aircraft's operating efficiency and make the decisions necessary to ensure the effectiveness of the flight.

Many people receive accounting information from business. Each user of accounting information requires that it be presented in a particular form and have a particular content. Figure 1 details the major forms of accounting information produced by the accounting system of a business and the corresponding groups of users for that information.

The focus here is on the common financial statements provided to users both inside and outside a business.

Financial statements aid decision makers in finding the financial strength, profitability, and outlook of a business. These statements are the primary source of information to users outside the business [Ref. 2:p. 6].

Bankers, brokers, and government regulatory agencies are keenly interested in the financial health of business organizations. A tremendous volume of accounting data is generated by modern corporations. Therefore, the information contained in financial reports must be of a highly summarized nature ye. focused enough to be relevant.

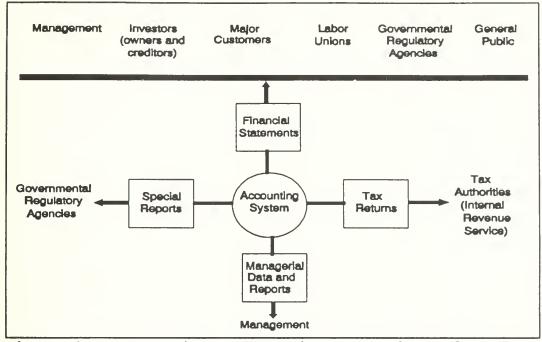


Figure 1. Accounting Information Users [Ref. 2:p. 7]

Financial statements, if they are to be useful, must be capable of being easily compared to past statements.

Fortunately, the accounting profession over the years has developed generally accepted accounting principles (GAAP).

They are "the accounting concepts, measurement techniques, and standards of presentation used in financial statements."

[Ref. 2:p. 30] These principles make financial statements easily comparable from one year to the next. Decision makers thus can view the financial performance of a business organization in a historical perspective and derive the information necessary to chart the organization's future course. Investors and bankers can better decide that companies show promise to make the allocation of scarce capital more efficient. Adherence to these principles also

increases the reliability of reported information [Ref. 2:p. 11].

The accounting profession must work diligently to keep abreast of changes in the laws that regulate economic activity and in the diversity of the economic activity itself. Maintenance of the generally accepted accounting principles is the chief responsibility of the Financial Accounting Standards Board (FASB). The FASB has seven members. Thei backgrounds range from public and private accounting to accounting education. The FASB is a private entity. Traditionally, accounting standards have been developed and refined in the private sector. The federal government also exercises much influence in this area. The Securities and Exchange Commission (SEC) regulates the content and reporting standards of financial statements for any corporation that offers securities to the public. [Ref. 2:pp. 11-12]

#### B. THE COMMON FINANCIAL STATEMENTS

The four most common financial statements reported externally are the balance sheet, income statement, statement of retained earnings, and statement of cash flows. Although derived from the same accounting records, each statement takes a somewhat different view of the well being of a business. Taken in sum with past statements, they are tremendous sources of information relating to business

operations. Financial statements are typically a page in length. Each has a heading consisting of the name of the business organization, the name of the statement, and the end date of the period covered by the statement or the date that the report was prepared. Normally, these statements are prepared annually. Many businesses, however, compile them on an interim basis such as monthly or quarterly to make better use of their information. The following paragraphs describe each of these statements, its particular uses, and its interrelationships with the other statements.

#### 1. BALANCE SHEET

The balance sheet is also known as the statement of financial position [Ref. 3:p. 35]. It is a snapshot of a business's financial position on a particular date. The balance sheet has two parts: the heading and the body. As illustrated in Figure 2, the body has three sections: assets, liabilities, and stockholders' equity. The ordering of the elements in each section follows an established pattern. The first asset listed is always cash. Following cash are assets such as accounts receivable and supplies. They will be converted into cash or consumed in business operations in the near future. The last assets listed are more permanent such as land and equipment. Finally, the liabilities are always found above the stockholders' equity. [Ref. 2:pp. 15-16]

VAGABOND TRA	VEL AGENCY, INC.
Balar	nce Sheet
Decembe	er 31, 19
Assets	Liabilities & Stockholders' Equit
Cash	Liabilities:  Notes payable
Total\$350,000	Total350,000

Figure 2: The Balance Sheet [Ref. 2:p.15]

Assets are defined as "economic resources owned by a business that are expected to benefit future operations."

[Ref 2:p. 29] Assets may either be tangible or intangible.

Tangible or physical assets include such things as buildings, cash, and office equipment. Intangible assets are often in the form of legal claims or rights. Patent rights are an example of this. Assets, despite of their form, are recorded at their original (historical) cost.

This is called the cost principle. The principle, however, creates a problem when someone wants to know how much a business is currently worth. [Ref. 2:p. 16]

Accountants make several assumptions when following the cost principle. First, accountants assume that assets are purchased for use and not for resale. This is called the

going-concern assumption. A business is assumed to be a continuing enterprise. Thus the sale of assets such as land and equipment could seriously impact business operations. The actual value of the assets is not as important as the intention to sell them. Second, accountants assume that the dollar is a stable unit of measurement such as the meter. This works well in times of stable prices. Excessive inflation, however, can render the asset costs meaningless. The cost basis for valuing assets ignores the tremendous fluctuation between the purchasing power of the dollar through time. [Ref. 2:pp. 17-18]

The FASB has attempted to eliminate this weakness of cost basis valuing for assets. The results were not encouraging. The cost of determining current market values and price-level adjustments was greater than the benefits provided. Accountants can point to the objectivity principle as justification for using the cost principle. This principle says that an asset's valuation should be factual and verifiable. Whereas market values are constantly changing, the price paid for an asset is recorded in the business's accounting records. This is an accurate reflection of the owner's valuation of the asset at the time that it was purchased. [Ref. 2:pp. 17-18]

Liabilities are the next section in the body of the balance sheet. Liabilities are also commonly known as debts. Two liabilities are worth noting. Accounts payable

is the liability created by the purchase of goods or services on credit. Notes payable arise from the borrowing of money to meet the business's goals. The business asks a lender to provide a specific sum of money. The lender in return requires that the money must be repaid by a specific time and that the repayment includes interest. The business then issues a formal written promise to repay the money under the restrictions required by the lender. [Ref. 2:pp. 18-19]

The last section of the body of the balance sheet is owners' equity. If the business issues public stock, this section is called stockholders' equity. Owners' equity represents the funds invested by the owners. This is a residual amount since the claims of creditors must legally be fully satisfied first. The accounting equation states that assets equal liabilities plus owners' equity. To clarify the meaning of owners' equity, it is often rewritten as owners' equity equals total assets minus to al liabilities. This emphasizes the point that owners' equity is a residual claim on the business' assets. Owners' equity can be increase either by funds invested by the owners or by profits from the business' operations. Conversely, owners' equity can only be decreased by distribution of assets to the owners or by losses incurred in the operation of the business. [Ref. 2:pp. 19-21]

Owners' equity normally has two components: capital stock, retained earnings. Capital stock represents the funds invested in the business by the owners. Capital stock is composed of shares. People who hold these shares are called stockholders. Retained earnings represent those funds not distributed to the owners and retained in the business. The distribution of funds to the owners is in the form of dividends. [Ref. 2:pp. 20-21]

#### 2. INCOME STATEMENT

The income statement shows "the operating results of a business by matching the revenue earned during a given period with the expenses incurred in obtaining that revenue." [Ref. 2:pp. 101] The income statement views the organization over a period rather than on a specific date. This is necessary to understand a business's economic performance as represented by the term net income. The loss or gain in resources over a period is much more meaningful to decision makers than the loss or gain for a single day.

The income statement is divided into revenue and expenses (Figure 3). "Revenue is the price of goods sold and services rendered during a given accounting period."

[Ref. 2:p. 86] When a business provides services or delivers goods to a customer it receives payment immediately or it bills the customer for future payment. The future payment is called an account receivable. Revenue can be

separated on an income statement into many categories such as sales, interest earned, and fees earned. Revenues are recorded at the time the services are provided or goods sold to the customer rather than when the cash payment is received. This is known as the realization principle that is another generally accepted accounting principle. [Ref. 2:p. 86]

Expenses, on the other hand, "are the cost of the goods and services used up in the process of earning revenue."

[Ref. 2:p. 87] They are, then, the costs associated with developing, producing, marketing, and selling a product.

Expenses can be placed into many categories from employee salaries to depreciation of buildings. To determine net income accurately, all expenses must be offset by the revenues they produced. This is called the matching principle. There should be a cause and effect relationship between all expenses and revenues reported for a given period. Recording expenses is not based on when the cash payment was made. Rather, it is based on the period in which the expenditure produced or help d produce the revenue. [Ref. 2:p. 87]

OLYMPIC SPORTING GOODS		
Income Statement		
For the Year Bading December 31, 19_	-	
Revenue: Sales Less: Sales returns and allowances Sales discounts	\$ 12,000	\$617,00 17,00
Net sales		\$600,00
Cost of goods sold:	\$ 60,000	
Met purchases		
Delivered cost of purchases	370,000	
Cost of goods available for sale Less: Inventory, Dec. 31	\$430,000 70,000	
Cost of goods sold		360,000
Gross profit on sales		\$240,000
Operating expenses:         \$74,000           Selling expenses:         \$74,000           Advertising.         29,000           Delivery service         10,900           Depreciation.         6,000		
Total selling expenses	\$119,900	
Total general & administrative expenses	61,100	
Total operating expenses		181,000
Income from operations		\$ 59,000 9,000
Net income		\$ 50,000

Figure 3. The Income Statement [Ref. 2:p. 190]

#### 3. STATEMENT OF RETAINED EARNINGS

The retained earnings statement shows the change in retained earnings during an accounting period (Figure 4).

As stated earlier in the discussion of the balance sheet,

retained earnings are that part of owners' equity that is generated by the profitable operation of the business. They are retained by the business rather than being distributed to the owners as dividends.

GREENHILL REAL ESTATE	
Statement of Retained Barnings	
For the Month Ended October 31, 19	
Retained earnings, Sept. 30, 19	\$ -0- 2,571
Subtotal Less: Dividends	\$2,571 1,800
Retained earnings, Oct 31, 19	\$ 771

Figure 4. The Statement of Retained Earnings [Ref. 2:p. 101]

#### 4. STATEMENT OF CASH FLOWS

The fourth common financial statement is the statement of cash flows (Figure 5). This statement builds upon the information contained in the previous statements. Though the balance sheet helps figure out solvency and the income statement helps determine profitability, users of this information also need to assess a business's ability to remain solvent. The basic purpose of the statement of cash flows is to provide information on the origin and amount of cash receipts and on the destination and amounts of cash payments. Cash is defined by the FASB to include cash and

cash equivalents. Cash equivalents are highly liquid, short term investments such as money market funds and Treasury bills. [Ref. 2:pp. 543-547]

ALLISON CORPORATION	
Statement of Cash Flows	
For the Year Ended December 31, 19	
Cash flows from operating activities: Net cash flow from operating activities	. \$ 50,000
Cash flows from investing activities:         \$ (65,000 Proceeds from sales of marketable securities.         40,000 (17,000 Collections on loans.         12,000 Proceeds from sales of plant assets.         150,000 Proceeds from sales of plant assets.         75,000	)
Net cash used by investing activities	. (115,000
Cash flows from financing activities: Proceeds from short-term borrowing. \$45,000 Payments to settle short-term debts. \$55,000 Proceeds from issuing bonds payable. 100,000 Proceeds from issuing capital stock. 50,000 Dividends paid. (40,000	)
Net cash provided by financing activities	. 100,000
Net increase (decrease) in cash	. 40,000
Cash and cash equivalents, end of year	. \$ 75,000

Figure 5. The Cash Flow Statement [Ref. 2:p. 545]

The body of the statement of cash flows is divided into four parts. The first section, cash flows from operating activities, is of critical importance. A business that cannot raise funds from operations will be hard pressed to gain sufficient funds from investing and financing activities to remain solvent. In addition, investors and

lenders will not commit their funds to a business that cannot develop sufficient funds from its operating activities to make interest payments, pay dividends, etcetera. The second and third sections detail the net cash flow from investing activities and from financing activities. The fourth section displays the net change in cash during the period.

#### C. RELATIONSHIPS BETWEEN FINANCIAL STATEMENTS

Financial statements by virtue of the common source of their data, are highly interrelated. Each provides a unique view of the business enterprise. This view conveys a large amount of information to user. Taken in sum with the other reports, however, the different views become a more coherent picture of the business enterprise's financial well being as a whole. For example, the casual user may be tempted to view a decrease in retained earnings between two successive balance sheets as a poor trend. To identify the natur the decrease, the user should look at the statement of retained earnings and the income statement. The statement of retained earnings shows how much of the net income went to the owners as dividends. The remaining amount when added to the retained earnings from the previous accounting period becomes the retained earnings for the current period. income statement then goes into greater detail explaining the reasons behind the size of the net income.

Similarly, the change in cash from one balance sheet to the next cannot be explained without looking at the statement of cash flows. The statement of cash flows goes into great detail explaining the inflows and outflows for the organization's cash and cash equivalents.

Nearly every entry in the statement of cash flow is dependent on information from the balance sheet or the income statement. The net cash flow from operations is equal to cash received from customers plus investment income minus the cash payments for merchandise and expenses. These quantities are accrual based measurements and must be converted to a cash basis before they can be used. The following examples describe this conversion process and illustrate the interdependence of these financial statements.

The entry Cash Received From Customers may simply be equal to the sales made for cash. Sales, however, are often made on credit. This is called accounts receivable and it is on the balance sheet. If accounts receivable increased during an accounting period, then the sales made on credit exceeded the cash collected on outstanding credit sales.

Thus, the true cash received from customers would be equal to net sales minus the increase in accounts receivable.

Similarly, if accounts receivable decreased during an accounting period, then credit sales were less than the cash collected on the outstanding credit sales. Thus, the true

cash received from customers would be equal to net sales plus the decrease in accounts receivable. The following formula summarizes this discussion [Ref. 2:p. 551]:

• Cash received from customers =
 Net sales + decrease in accounts receivable}
 or - increase in accounts receivable}

The entry Cash Payments For Expense is usually very different from the amount of expenses shown on the income statement. The amount of expenses on the income statement is equal to goods and services used during the accounting period. There are several reasons for the difference.

First, several expenses do not require a cash payment.

Therefore, such non-cash expenses as depreciation, though accounted for on an accrual basis, must be deducted from the total expenses. [Ref. 2:p. 553]

Second, difficulty arises because expenses are recorded when their associated goods or services are used that may not be when the cash payment for the expense was made.

Payments made in advance, such as insurance, become an asset known as a prepaid expense. An increase in prepaid expenses must be added to total expenses whereas a decrease must be subtracted. If cash payments are not made until a following period, they become a liability called accrued expense payable. If accrued expense payable increases, then expenses purchased on credit have exceeded cash payments made on the liability. Therefore, the increase should be

subtracted from total expenses. The converse is also true. The following formula summarizes the this discussion [Ref. 2:p. 553]:

The income statement, statement of retained earnings, and statement of cash flows, in essence, form a bridge between consecutive balance sheets. They allow the user to go beyond simple horizontal (trend) analysis. Using vertical analysis on these other statements brings meaning to the changes seen in the balance sheets. A useful analogy is a sailor who watches the surface of the ocean for signs of change. Though the swells increase with the passing days, he cannot be sure if a storm is coming his way or whether it will pass harmlessly by hundreds of miles away. If he has knowledge of the changes in barometric pressure, temperature, wind direction, ocean temperature, etcetera, which is the third dimension, he would know why the swell had changed and if he needed to chart a new course.

#### III. SYSTEM ARCHITECTURE

#### A. METHODOLOGY

This system was developed through prototyping. This methodology was chosen for the following reasons:

- The intended user was uncertain about system requirements.
- It provides a working model quickly that aids the user in discovering his real requirements.
- It encourages active end-user participation.
- It allows for rapid development of a working system.
  This is necessary due to the lack of development time.
- Its iterative nature provides an opportunity to more quickly overcome the learning curve for the development platform.
- · It allows for the early detection of errors.

#### B. STRUCTURE

The Small Business Decision Support System (SBDSS) is designed as a stack of four spreadsheets within one file. This reduces the overhead associated with linking several files together. Functionality is divided between the spreadsheets to simplify maintenance. Spreadsheet A contains the financial data. Spreadsheet B contains the User Data Entry Form. Spreadsheet C contains all the macros which power the system's menus. Finally, Spreadsheet D

contains the program documentation consisting of range names, their locations, and brief definitions.

#### 1. Spreadsheet A

Spreadsheet A is the financial data storage area for the system. Though Lotus 1-2-3 can function as a sophisticated database, this database is designed as a series of reports. Each series of reports is assigned a range name. The reports on the left are called JANUARY and the far right reports are called DECEMBER. Within each range there are six reports corresponding to the financial reports required by the user each month: Income Statement, Statement of Retained Earnings, Balance Sheet, Statement of Cost of Goods Sold, Statement of Cash Flows, and Performance Indicators. Figures 6 through 11 provide examples of each financial report.

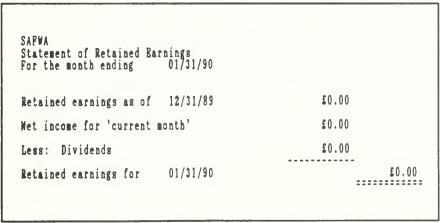


Figure 6. Statement of Retained Earnings

SAPWA Income Statement			
For the Month Ending 01/31/90			
Revenue:			
Sales		£0.00 £0.00	
Less: Sales tax		• • • • • • • • • • • • • • • • • • • •	
Net sales Interest Barned		0.00 \$0.00	
Total revenue	•••	•••••	20.00
Cost of Goods Sold:			
Inventory, beginning of month Purchases	£0.00	\$0.00	
Add: Customs	€0.00		
Preight	00.03		
Delivered cost of purchases	•••	0.03	
Cost of goods available for sale Less: Inventory, end of month		£0.00 £0.00	
	•••	•••••	e0 00
Cost of goods sold		•-	\$0.00
Gross profit on sales			20.00
Operating expenses: Selling expenses		£0.00	
Marketing expenses:		•0.00	
Advertising Bxhibitions	0.00 \$0.00		
Seminars	\$0.00		
Total marketing expenses		£0.00	
General & admin. expenses: Office salaries	£0.00		
Utilities Travel	0.00 20.00		
Interest	£0.00		
Other	\$0.00		
Total general & admin. exper	ses:	\$0.00	
Total operating expenses			\$0.00
Income from operations			\$0.00
Income tax expense			0.00
Net income			£0.00

Figure 7. Income Statement

SAFWA Balance Sheet For the month ending 01/31/90			
Assets:			
Current assets:  Cash Bank Accounts receivable Prepaid expenses Merchandise inventory Consumable supplies	\$0.00 \$0.00 \$0.00 \$0.00 \$0.00		
Total current assets Plant and equipment: Office equipment Furniture Building	£0.00 £0.00 £0.00	£0.00	
Total plant and equipment	***********	£0.00	
Total assets	••	-	£0.00
Liabilities and Stockholders' Equit	у:	:	
Current Liabilities: Accounts payable Income taxes payable Notes payable	£0.00 £0.00 £0.00		
Total current liabilities Long term debt (Notes payable) Stockholders' equity: Capital stock Retained earnings	£0.00 £0.00	£0.00 £0.00	
Total stockholders' equity		£0.00	
Total liabilities and stockholders'	equity		<b>£</b> 0.00

Figure 8. The Balance Sheet

SAPWA Statement of Cost of Goods Sold For the month ending 01/31/90		
Inventory, beginning of month		£0.00
Purchases	20.00	
Add: Customs Preight	00.02 00.03	
Delivered cost of purchases	•••	00.02
Cost of goods available for sale		£0.00
Less: Inventory, end of month	•••	0.00
Cost of goods sold		£0.00

Figure 9. The Statement of Costs of Goods Sold

Performance Indicators For the month ending 01/31/90	
For the month ending 01/31/90	
Margin %	0.0
Return on capital	0.0
Asset turnover	0.0
% of gross margin on sales	0.0
Operating expense ratio	0.0
Return on common stockholders' equity	0.0
Working capital	\$0.0
Inventory turnover	0.0
Current ratio	0.0

Figure 10. Performance Indicators

SAPWA Statement of Cash Flows For the month ending 01/31/90			
Cash flows from operating activities: Cash received from customers Interest received	£0.00 £0.00		
Cash provided by operating ac	tys.	00.03	
Cash paid to suppliers Cash paid to employees Interest paid Income taxes paid Cash payments for expenses	00.02 00.03 00.03 00.03		
Cash disbursed for operating	actys.	£0.00	
Net cash flow from operating activitie	8		00.02
Cash flows from financing activities: Proceeds, short-term borrowing Proceeds, issuing capital stoc Less:	£0.00 £0.00		
Payments, short-term debts	00.03	<b>£</b> 0.00	
Net cash provided by financing activit	ies		00.00
Net increase (decrease) in cash Cash and cash equivalents, beginning o	f month	•	£0.00 £0.00
Cash and cash equivalents, end of mont	h	•	\$0.00

Figure 11. Statement of Cash Flows

Spreadsheet A also contains copies of the User Data

Entry Form inputted for each month. These forms are located
below the respective month's range of reports. They are
not, however, associated with these range names. Subsection
2 provides further detail on this form.

This approach has several advantages. First, the financial data is stored in the same report that is used for both viewing and printing. This consistency makes system maintenance less burdensome and helps ensure that the output of the system is always identical with the stored data.

Printing the reports is greatly simplified. The appropriate macro need only print the required range. Advanced formatting is not required since fifty-six rows is the default printing parameter in Lotus 1-2-3. Thus, all forms are printed on a separate sheet without designating page breaks.

Second, storing data in forms also makes it easier to develop macros that manipulate the data. Each data element is in a fixed locat on. This eliminates the need to account for shifting cell addresses such as occurs when records are appended in a standard Lotus 1-2-3 database application.

Also, many data elements are used elsewhere in the reports for a particular month. For example, each form within a month has the same date. Copying the date used in the Income Statement, the first report, into subsequent reports ensures consistency of that data. This also simplifies the macro which copies data into the reports for a particular month. The particular data element need only be copied once into the particular range. After that, embedded formulas ensure data consistency throughout all reports.

In a similar way, when a formula in a report requires a data element that is found in a report from the previous month, it is very simple to retrieve that data since its cell address does not change. For example, in the Statement of Retained Earnings for each month there are two formulas that retrieve data from the previous month. The closing

date and the retained earnings for the previous month are used as the first inputs for finding the retained earnings for the current month.

Third, since there are only twelve months in the database, the user does not have to specify a particular year when he/she wishes to view, print, or plot the data. This reduces the need for user input. Macros can be much simpler when they do not have to deal with error conditions created by inaccurate user input.

Also, the database does not grow with each additional month of data. The data input macro overwrites the data from the same month from the previous year with that from the current year. This keeps the system smaller and less likely to exceed the memory resources of the host computer. The need for maintenance macros is similarly reduced. There is no need to develop macros that purge outdated data.

A potential weakness is the presence of circular references. These are formulas that link the months together so that the solution for a formula becomes the argument for the corresponding formula in the subsequent month. There are two of these references. The retained earnings and cash (and cash equivalents) data elements for the previous month are used in formulas in the current month. If the Global Recalculation setting is set to automatic, all formulas throughout the worksheet will automatically recalculate if any of the arguments change.

Since each month is linked to the one behind and after it, the calculations continue until the value exceeds the length of a cell. This is cured by setting Global Recalculation to manual when the system is started and only allowing macros to recalculate specific ranges.

## 2. Spreadsheet B

Spreadsheet B contains the User Data Entry Form. An example of this form can be seen in Figure 12. This form is used as a template for entering each month's financial data. This form takes advantage of the difference in color between protected and unprotected cells to distinguish the inputted data, in green, from data element labels, in white. The form also contains embedded formulas for converting between currency amounts in U.S. dollars and British pounds.

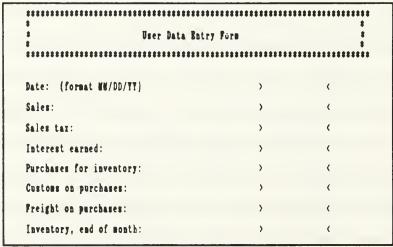


Figure 12. User Data Entry Form

Selling expenses:		)	(
Advertising expenses:		)	(
Exhibition expenses:		>	(
Seminar expenses:		>	(
Office salaries:		>	(
Utility expenses:		>	<
Travel expenses:		>	<
Interest expenses:		>	<
Income tax expense:		>	<
Other expenses:		>	<
Dividends paid:		>	(
Cash on hand:		>	<
Bank account balances:			
	l) in \$'s 2) in \$'s	<b>&gt;</b>	(
	Exch rate Total	<b>&gt;</b>	<pre> <pre> <pre> <pre></pre></pre></pre></pre>
Balance of accounts receivable:		>	(
Prepaid expenses:		>	. (
Cost of consumable supplies on	band:	)	(
Cost of office equipment owned	•	>	<
Cost of furniture owned:		>	(
Cost of building (if owned):		>	<
Balance of accounts payable:		>	(
Income taxes payable:		>	(
Notes payable (less than one ye	ear):		
	1)B.LE.£'s 2)T. \$'s	<b>&gt;</b>	(
	3)#.LE £'s	>	(
•	l)Other E's Total	>	(Press ! for tota
Long term debt (greater than or	ne year):	>	(
Cmpital mtock:		>	(
Proceeds from short term borrow	ring:	>	(
Proceeds from issuing capital s	stock:	>	(
Payments on short term debts:	Press ALT-R to re	)	( aaad aaa

Figure 12 (cont). User Data Entry Form

## 3. Spreadsheet C

Spreadsheet C contains the macros that provide all the functionality for the system. Appendix A contains a complete listing of all macros found in Spreadsheet C. Placing all macros on the same spreadsheet or in the same location is extremely beneficial. This application is large (over 200 kilobytes of disk space) and spans 4 spreadsheets. The operations executed by the macros cover this entire workspace. The flow of instructions can be difficult to trace. Placing all macros in one location greatly simplifies troubleshooting, maintenance and modification.

# 4. Spreadsheet D

Spreadsheet D contains a complete listing of all range names used in the system (see Appendix B). The cell addresses and a brief description also accompany each range name. This list is produced by using Lotus' self-documentation facilities. This self-documentation feature is extremely useful for system maintenance. The list can be quickly updated. This gives the maintainer with a current and accurate list to use as a reference tool. The maintainer, therefore, benefits by having a ready reference to allow more rapid troubleshooting and modification.

### C. MENU HIERARCHY

SBDSS uses a customized menuing interface. This approach is very popular among users who only use an

application occasionally [Ref. 4:p. 587]. All menu items are self-explanatory and use terminology common to the user. To reduce the clutter of too many menu items, the menus are designed hierarchically. The branching of the hierarchy is based on the logical flow of choices that the user makes to define what he/she wants to do. The user is able to access any of the tools in the system from anywhere in the menu hierarchy with only a few keystrokes.

Using menus has significant advantages. Even the occasional user is able to quickly learn how to manipulate the system. The user only has to use three keys to access all the features available: LEFT ARROW, RIGHT ARROW, ENTER. Since the menus will only respond to a few keys as input, the macros powering the menus do not have to provide for possible error conditions arising from incorrect user input. Finally, Lotus 1-2-3 provides a rich macro language that makes developing menus somewhat simple and fast.

Dialogue charts provide a powerful tool for evaluating the sequencing and variations of screens seen by the user. Figures 13 through 16 are the dialogue charts for this system. The bidirectional arrows show that the user can move to a subordinate menu or function by selecting that menu option. Then, the user can move to a superior menu by using the ESCAPE key. The arrows also show the flow of control through the menu hierarchy. Each rectangle is divided into three parts. The top section contains a number

that is used to show the ancestry of any menu or screen.

The middle section describes the screen, menu, or function.

The bottom section refers to the user to the approximate location of the corresponding macro, menu, or screen in Spreadsheet C as illustrated in Figure 17. [Ref. 4:pp. 589-591]

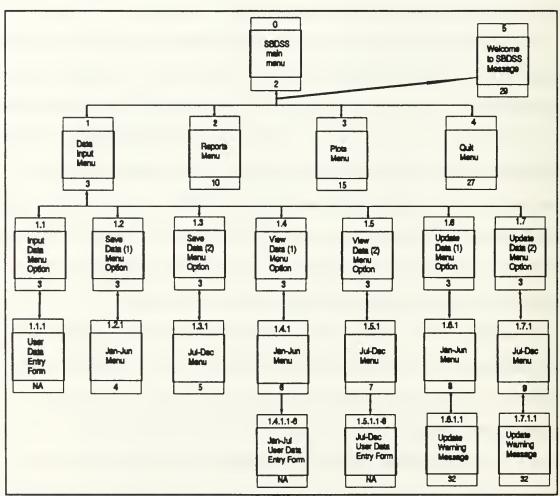


Figure 13. The Main Menu including the Data Input Menu

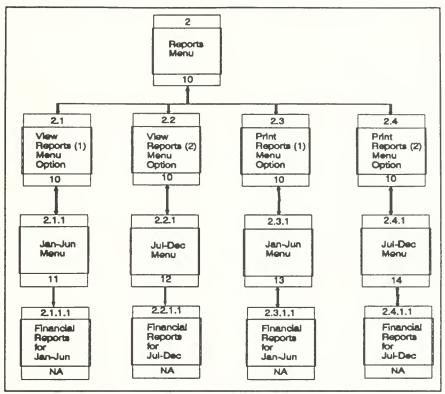


Figure 14. The Reports Menu

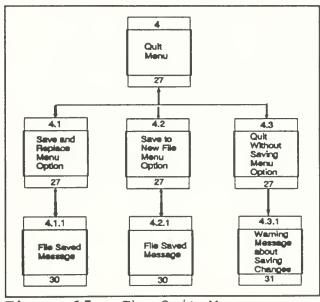


Figure 15. The Quit Menu

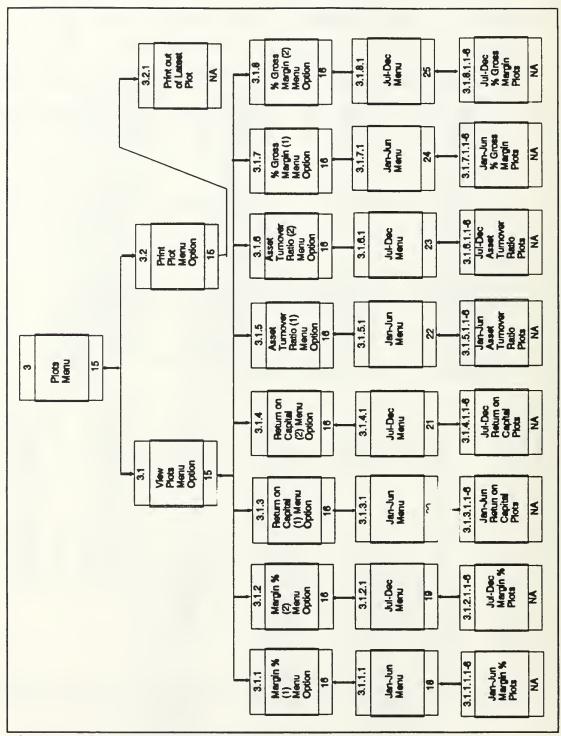


Figure 16. The Plots Menu

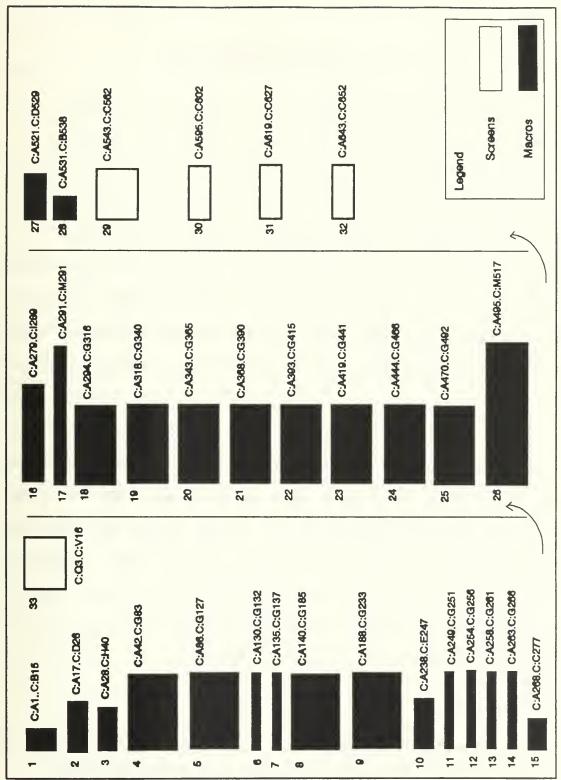


Figure 17. The Macros, Menus, and Screens in Spreadsheet C

#### IV. SYSTEM DEMONSTRATION

The Small Business Decision Support System (SBDSS) is designed to provide the user with powerful tools that can be accessed via customized menus. Each menu item is carefully chosen to be brief yet easily understood by the user. An explanatory subtitle accompanies each menu choice and reduces the need for help screens. The entire functionality of this system is never more than a few keystrokes away. This hierarchial, well defined menu system is the key which allows the user access to all the tools the system has to offer.

The following paragraphs provide a user's guide to traversing the menu structure. The opening screen and MAIN menu (Figure 18) are automatically generated when the user retrieves the application file. The MAIN menu divides the system into four functional modules: DATA INPUT, REPORTS, PLOTS, QUIT. The steps in each module are illustrated by figures showing examples of the screens seen by the user. When appropriate, only a menu is displayed.

### A. DATA INPUT

The user selects DATA INPUT from the MAIN menu when one of four conditions exist. (1) The user needs to input monthly data. (2) The user wishes to save monthly data that

has already been inputted. (3) The user wants to view/modify data that has already been inputted. (4) The user wishes to modify inputted data. After selecting the DATA INPUT menu, the user is presented the menu in Figure 19. The menu items enclosed by brackets are not immediately visible. They can be found using the arrow keys to move left or right and then pressing the RETURN key. There is only one INPUT DATA menu item since this function is not specific to a particular month. It is used to input monthly data into a generic data entry form. SAVE, VIEW, and UPDATE DATA are divided into two parts each because each menu item is specific to a range of six months: (1) January through June, and (2) July through December.

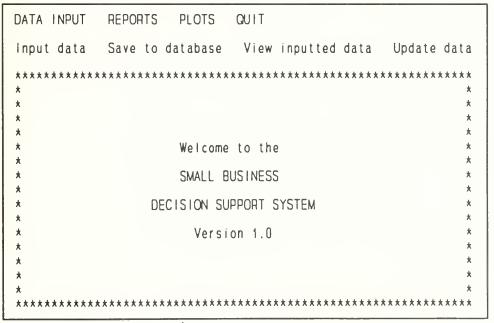


Figure 18. The Main Menu

INPUT DATA SAVE DATA (1) SAVE DATA (2) VIEW DATA (1) VIEW DATA (2)
Input the new data into the Data Entry Form

[UPDATE DATA (1) UPDATE DATA (2)]

Figure 19. Data Input Menu

If the user needs to input monthly data, he/she selects INPUT DATA. This executes a macro that displays the User Data Entry Form and then returns system control to user. Figure 20 contains the top portion of this form. Data is inputted by scrolling to the appropriate cell, typing the value (or label for the month), and pressing return. Two fields, bank account balances and notes payable, have notes to their right which instructs the user to press the F9 function key to execute an imbedded formula. Properly positioned entries are displayed in green. Entries improperly placed appear in white. At the bottom of the User Data Entry Form, the user is instructed to press the ALT and R keys to return the system to the MAIN menu after data input is complete.

User Data Entry Form 8		
	****************	*************
Date: (format WW/DD/YY)	>	(
Sales:	>	(
Sales tax:	>	(
Interest earned:	>	(
Purchases for inventory:	>	(
Customs on purchases:	>	(
Freight on purchases:	>	(
Inventory, end of month:	>	(
Selling expenses:	>	(
Advertising expenses:	>	(

Figure 20. The User Data Entry Form

After the user restarts the system, the MAIN menu reappears with a new system logo screen that is used throughout the remainder of the user's session (Figure 21). To begin saving the monthly data, the user should again select the DATA INPUT submenu. As indicated in the menu's subtitle, the user selects SAVE DATA (1) to save data for January through June (Figure 22). SAVE DATA (2) covers the months July through December. This division is needed due to LOTUS 1-2-3's limit of eight menu items per customized menu. The user is now presented with a choice of six months (Figure 23). Selecting the appropriate month, saves the data to the appropriate month's financial reports and recalculates them so they are ready to be viewed or printed. The system then returns the user to the MAIN menu.

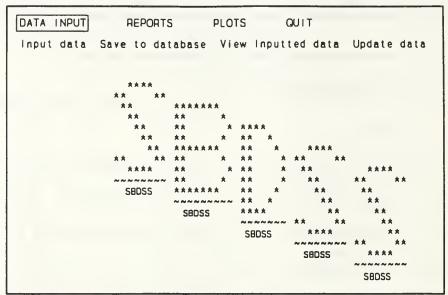


Figure 21. The Main Menu

```
INPUT DATA SAVE DATA (1) SAVE DATA (2) VIEW DATA (1) VIEW DATA (2)

Copy data to the database for January - June

[UPDATE DATA (1) UPDATE DATA (2)]
```

Figure 22. The Data Input Menu

JAN FEB MAR APR MAY JUN
Save the data for January

Figure 23. The Save Data Menu

The user may view and modify the data inputted for any month. From the DATA INPUT submenu, the user selects VIEW DATA (1) or VIEW DATA (2) (Figure 24). Now the user must select the appropriate month. Selecting a month brings the corresponding User Data Entry Form to the screen and transfers control back to the user. The user is now free to

modify the data in the same way that the data was inputted. When modifications are complete, the user presses the ALT and R keys to return the system to the MAIN menu.

```
INPUT DATA SAVE DATA (1) SAVE DATA (2) VIEW DATA (1) VIEW DATA (2)

View the data inputted for January - June

[UPDATE DATA (1) UPDATE DATA (2)]
```

Figure 24. The Data Input Menu

The modified data must now be saved to the database.

Again, the user selects DATA INPUT from the MAIN menu. From the DATA INPUT submenu, the user must select either UPDATE

(1) or UPDATE (2) (Figure 25). The user then selects the appropriate month. After the system saves the data and recalculates the formulas in the financial reports, the system displays a warning message to the user (Figure 26).

This message reminds the user to do a manual update to the data for every subsequent month up to the current month.

Many financial reports either directly or indirectly use data that results from calculations in the previous month.

Even if no change is required in the subsequent months, the user still must do the updates.

```
SAVE DATA (2) VIEW DATA (1) VIEW DATA (2) UPDATE DATA (1) UPDATE DATA (2) Update data inputted for January - June
[INPUT DATA SAVE DATA (1)]
```

Figure 25. The Data Input Menu

Figure 26. Update Data Warning Message

### B. REPORTS

The financial reports for any of the last twelve months can be viewed or printed by selecting REPORTS from the MAIN menu (Figure 27). To view financial reports, select either VIEW (1) or VIEW (2) (Figure 28). The user further defines his choice by selecting the desired month from the submenu that appears (Figure 29). The system brings the first report to the display and then turns control over to the user. The user may now scroll up or down to view all the reports. The user should take extreme care not to add,

delete, or modify any of the data. When done viewing, the user must press the ALT and R keys to return the system to the MAIN menu.

DATA INPUT REPORTS PLOTS GUIT

View reports Print reports

Figure 27. The Main Menu

VIEW (1) VIEW (1) PRINT (1) PRINT (2)

View the financial reports for January - June

Figure 28. The Reports Menu

JAN FEB MAR APR MAY JUN
Scroll to view all financial reports for January

Figure 29. The View (1) Menu

The user also may print the reports for any month by selecting either PRINT (1) or PRINT (2) from the REPORTS submenu (Figure 30) and then by selecting the desired month (Figure 31). While printing continues in the background, the system returns the user to the REPORTS submenu. If the user does not wish to view or print any more reports, he/she should press the ESC key and return to the MAIN menu.

VIEW (1) VIEW (2) PRINT (1) PRINT (2)
Print the financial reports for January - June

Figure 30. The Reports Menu

JAN FEB MAR APR MAY JUN
Print all financial reports for January

Figure 31. The Print (1) Menu

### C. PLOTS

Plots of the first four performance indicators can be obtained by selecting PLOTS from the MAIN menu (Figure 32). The user must select VIEW PLOTS from this submenu to begin defining that plot to view (Figure 33). The subsequent submenu allows the user to choose that performance indicator he/she would like to view. For instance, the user may want to view a plot of the margin percentage for the last twelve months ending in January. He/she would select MARGIN % (1) from the VIEW PLOTS submenu (Figure 34). The following menu allows the user to select JAN to identify the twelve month range of data that he/she wishes to view. Figure 35 is an example of a performance indicator plot. The user can return to the VIEW PLOTS submenu from the plot being displayed to view more plots by pressing the ESC key.

DATA INPUT REPORTS PLOTS QUIT
View plots Print plots

Figure 32. The Main Menu

VIEW PLOTS PRINT PLOTS

View plots of several performance indicators

Figure 33. The Plots Menu

MARGIN % (1) MARGIN % (2) RETURN ON CAPITAL (1) RETURN ON CAPITAL (2)

View a plot of the Margin % ending in January - June

[ASSET TURNOVER (1) ASSET TURNOVER (2) % GROSS MARGIN ON SALES(1)

% GROSS MARGIN ON SALES (2)]

Figure 34. The View Plots Menu

If the user views a plot that he/she would like printed, he/she should press the ESC key twice to exit the plot and return to the PLOTS submenu. Now the user must select the menu item PRINT PLOTS (Figure 35). The system begins printing the plot in the background while it returns the user to the VIEW PLOTS submenu. The user may now view other plots and then print them in the same way.

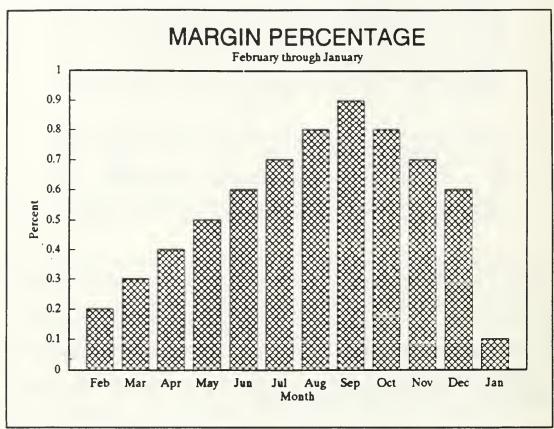


Figure 35. Plot of Return on Capital

VIEW PLOTS PRINT PLOTS

Print the plot most recently viewed

Figure 36. The Plots Menu

## D. QUIT

The user also may save the current application and/or exit Lotus 1-2-3 by selecting QUIT from the MAIN menu (Figure 37). To save the current file under the same name and in the same location on disk, the user should select the submenu item SAVE & REPLACE (Figure 38). The system uses a

screen to tell the user that his/her file has been successfully saved and that he/she can safely exit Lotus 1-2-3 (Figure 39). The user is then returned to the MAIN menu.

DATA INPUT REPORTS PLOTS QUIT

Save & replace Save to new file Exit w/o saving

Figure 37. The Main Menu

SAVE & REPLACE SAVE TO NEW FILE QUIT WITHOUT SAVING Replace the file on disk with the copy in memory

Figure 38. The Quit Menu

Figure 39. The Successful Save Message

If the user wishes to save the file under a different filename or to a different location (ie. for a backup), the user should select SAVE TO NEW FILE from the QUIT submenu (Figure 40). The system displays the current filename and path in the menu area at the top of the screen (Figure 41). The user may edit the filename and path as required. When finished editing, the user must press the RETURN key to

begin saving the file. When the system displays "Ready" in the upper right hand corner of the screen, the user must press RETURN again to continue.

SAVE & REPLACE SAVE TO NEW FILE QUIT WITHOUT SAVING

Save the current file in memory to a disk under a new file name

Figure 40. The Quit Menu

Enter name of the file to save: D:\123r3\...

Figure 41. Lotus 1-2-3 Prompt for New File Name

This is necessary to handle the error condition arising when the filename already exists. There is no way to prompt the user to press RETURN to continue. If this occurs, Lotus 1-2-3 then asks the user via its own menu whether he/she wishes to cancel the operation, replace the file on disk with the file in memory, or to create a backup copy of a file on disk. Selecting CANCEL brings up the screen that tells the user that the file has been successfully saved. This is incorrect but cannot be avoided. After a short delay, the user is returned to the MAIN menu. Selecting REPLACE or BACKUP executes the indicated function, brings up the same screen, and returns the user to the MAIN menu.

The user may select QUIT WITHOUT SAVING from the QUIT submenu to exit Lotus 1-2-3 (Figure 42). The system displays a warning message alerting the user that any

changes not saved earlier will be lost when exiting (Figure 43). The system hands control over to the Lotus 1-2-3 QUIT submenu at this point. If the user selects YES, the system will beep a warning and tell him/her that changes to the file have not been saved, even if the file was previously saved. This results from Lotus 1-2-3 viewing the operation of the system's macro as the creation of changes to the file. The user need only select YES again to exit Lotus 1-2-3. If the user selects NO, he/she will be freed from macro control and left in the current spreadsheet. The Main menu may now be retrieved by pressing the ALT and R keys.

SAVE & REPLACE SAVE TO NEW FILE QUIT WITHOUT SAVING

Exit SBDSS without saving changes made to the file in memory

Figure 42. The Quit Menu

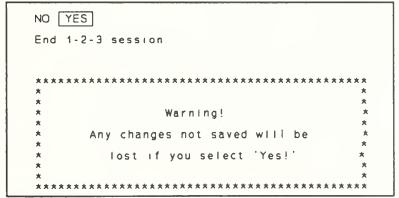


Figure 43. Lotus 1-2-3 Session Edit Prompt and System Exit Warning

#### V. CONCLUSION

This thesis examined the feasibility of developing a financial reporting system that could be applied to a small business. The financial reporting model was first developed from generic examples available in accounting textbooks.

The model was then refined based on the example of an actual small business. The business provided sample information necessary to define the data requirements and functionality for the system. Finally, Lotus 1-2-3 Release 3.0 was selected as the prototyping environment for the Small Business Decision Support System (SBDSS).

### A. RESEARCH RESULTS

The thesis research was guided by a primary and two subordinate research questions.

 Is it possible to automate the time intensive task of developing integrated financial statements and associated plots of performance indicators?

The prototype provides an affirmative answer to this question. The user only has to enter the data once and then use a minimum of keystrokes to produce accurate financial reports and plots of performance measures.

The next question referred to Lotus 1-2-3 Release 3.0 specifically.

• Is Lotus 1-2-3 Release 3.0 an effective development environment for a small business manager, who is a computer novice, to develop useful decision support tools?

This release of Lotus 1-2-3 has proved to be a powerful development environment for the SBDSS prototype. The learning curve is initially very steep before the user can produce substantive macros. The key to success in using this tool is to purchase a variety of Lotus 1-2-3 macro reference books. Lotus is so widely used that nearly any difficulty experienced by the novice has been seen before and documented. These books provide a rich variety of examples that can sometimes be adapted to work in the user's application with a minimum of effort.

The third question deals with data redundancy and consistency.

 Can a system be designed to reduce redundant data entry and thus improve data consistency across highly integrated financial statements?

The SBDSS prototype effectively reduces data entry redundancy and increases data consistency. The user inputs the monthly data only once in the User Data Entry Form despite the number of times that data is used in the various financial reports. Embedded formulas within the reports

ensure that data required in other reports is copied from where it was first received from the User Data Entry Form.

Copying from a single source ensures data consistency.

In addition, prototyping proved to be a very useful methodology. Once a sufficient knowledge of the Lotus 1-2-3 macro language was obtained, development proceeded rapidly. The intended user was initially uncertain of system requirements. He provided a general outline of needed functionality and data availability. The first prototype provided the user with a working model that allowed him to refine his real requirements. The user was encouraged to experience the system's user interface and evaluate its suitability. Two successive revisions of the prototype were completed in a very short time due in part to the flexibility inherent in the system's macros. Testing, using sample data, was completed before letting the user evaluate each prototype and revision. Thus, potentially damaging errors in system design and coding were detected early in the development. Prototyping effectively binds the user and the developer into a single team to reduce communication barriers, clarify system requirements, detect errors, and speed development.

## B. AREAS FOR FUTURE RESEARCH

Adding functionality to the existing system is the most likely area for future research. The system la is

comprehensive analytical tools. If the system is capable of vertical and horizontal analysis, it could provide the user with information on the business's profitability, developing problems, weaknesses and strengths, and its operating efficiency. Knowing the pertinent trends and ratios only tells half the story. The underlying drivers to these measures often can only be examined by looking at all the reports for a period.

The primary weakness of the system is the design of the database. A forms based database is not conducive to formal database search, query, and data manipulation techniques. A database consisting of records and using the available database tools in Lotus 1-2-3 would be more efficient. It would require less code to do required data manipulation. Also, since reports only need to generated when required, the size of the database could be reduced significantly.

Portability could be increased in two ways. First,

Lotus 1-2-3 can access dBase files. This system could be modified to sit on top of any small businesses database if it is developed in Dbase. Second, the design of the reports could be automated so that a business could customize the system to their particular needs. This separate module would modify existing macros to handle the new data requirements as long as they met established financial reporting standards.

As the system becomes more complex, the menu item descriptions would not provide enough information to help the user in operating the system. Context sensitive help could easily be added and would only be a keystroke away in most circumstances. The screens also could be modified from the generic system logo to a more helpful screen tailored to the specific menu being displayed.

#### APPENDIX A

Appendix A contains the macros used in the SBDSS file. The macros are displayed exactly as they appear in Spreadsheet C. They were printed using Lotus 1-2-3's own printing function. The column and row headers are included to make referencing and maintenance easier. Many of the menus and several ranges cannot be printed on a single page due to their width. Therefore, the macros were printed several columns at a time from top to bottom. Each page consists of seventy-three rows. Pages containing adjacent columns in the same range of rows are arranged sequentially. Several macros are also very wide and to appear to be overwritten by the macro in the adjacent column. The macros are complete, however, and may be seen by entering the spreadsheet.

```
В
       C
                                                                                                                                                                                                                                                                                                                                                                                                                   C
                                   MACROS
   1
  2
                                   10
                                                                                                                                {MAIN}
  Ś
                                   11
                                                                                                                                 {MAIN}
  8
                                 MAIN
                                                                                                                                 { PRAMBOPP }
  9
                                                                                                                                 /RUbanner
                                                                                                                                GOTO banner corner /WGDOIC(ESCAPE): Q
  10
  ii
  12
                                                                                                                                /WGRM
  13
                                                                                                                                (MENUBRANCE MENU)
  16
  17
                                MENU
                                                                                                                                 DATA IMPUT
                                                                                                                                                                                                                                                                                                                              REPORTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PLOTS
                                                                                                                                                                                                              Save to database View reports Print
DATA INPUT} (MENUBRANCH REPORTS)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       View plots Print [MENUBRANCH PLOTS]
  18
                                                                                                                                Input dats
                                                                                                                                                                                                                                                                                                                                                                                                                       Print reports
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Print plots
                                                                                                                                     MENUBRANCH DATA_INPUT}
  19
 20
                                                                                                                                                                                                                                                                                                                               BSC_2_MBNU}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           {BSC_2_MENU}
                                                                                                                                 {BSC_2_MBNU}
 21
                                                                                                                                 GOTO screen corner
  22
                                BSC_2_MENU
 23
 24
                                                                                                                                     PRAMEOFF
                                                                                                                                    MENUBRANCE MENU!
  25
                                                                                                                                 ESC_2_MENU}
                               DATA_IMPUT
 28
                                                                                                                               INPUT DATA
                                                                                                                                                                                                                                                                                                                           SAVE DATA (1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SAVE DATA (2)
                                                                                                                               Input the new data into the DaCopy data to the database for Copy data to the database for /REdstbloks {WENUBRANCE PLACE_DATA1} {WENUBRANCH PLACE_DATA2}
 29
  30
                                                                                                                               /Chank_balance dstblnks_21
/Cnotes_payable datblnks_30
 31
                                                                                                                                                                                                                                                                                                                              (BSC2_DATA_INPUT)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BSC2_DATA_INPUT)
 32
                                                                                                                                 GOTO entry form
GOTO datblinks
 33
 35
                                BSC2_DATA_IMPUT{GOTO}screen®
 36
 37
                                                                                                                                   GOTO screen_corner*
PRAMEOPP
 38
                                                                                                                                     MBNUBRANCH DATA INPUT)
 39
 40
                                                                                                                                 BSC_2_MENU}
41
42
43
                                PLACE_DATA1
                                                                                                                             Save the data for January
                                                                                                                                                                                                                                                                                                                        Save the data for February /BUfebruary /BUfebruary /Gdatblnhs 1 feb_month /Cdatblnhs 2 feb_sales /Cdatblnhs 2 feb_sales /Cdatblnhs 3 feb_stax /Cdatblnhs 5 feb_purchases /Cdatblnhs 6 feb_customs /Cdatblnhs 6 feb_customs /Cdatblnhs 9 feb_sellerp /Cdatblnhs 9 feb_sellerp /Cdatblnhs 10 feb_advertise /Cdatblnhs 11 feb_exhibit /Cdatblnhs 12 feb_sellers /Cdatblnhs 13 feb_sellers /Cdatblnhs 14 feb_utilities /Cdatblnhs 15 feb_interp /Cdatblnhs 15 feb_interp /Cdatblnhs 17 feb_interp /Cdatblnhs 18 feb_otber /Cdatblnhs 19 feb_dvds /Cdatblnhs 19 feb_dvds /Cdatblnhs 20 feb_cash /Cdatblnhs 22 feb_acctrovbl /Cdatblnhs 23 feb_preexp /Cdatblnhs 25 feb_formiture /Cdatblnhs 25 feb_offequip /Cdatblnhs 25 feb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Save the data for March
                                                                                                                          Save the data for January /RUjanuary /RUjanuary /Cdatblnks 1 jan_month /Cdatblnks 2 jan_sales /Cdatblnks 3 jan_stax /Cdatblnks 5 jan_purchases /Cdatblnks 6 jan_customs /Cdatblnks 6 jan_customs /Cdatblnks 8 jan_inventory /Cdatblnks 9 jan_sellexp /Cdatblnks 10 jan_advertise /Cdatblnks 11 jan_exhibit /Cdatblnks 12 jan_sellarp /Cdatblnks 13 jan_salaries /Cdatblnks 14 jan_utilities /Cdatblnks 15 jan_travel /Cdatblnks 17 jan_intexp /Cdatblnks 17 jan_intexp /Cdatblnks 18 jan_other /Cdatblnks 19 jan_other /Cdatblnks 20 jan_cash /RVdatblnks 21 jan_actrcvbl /Cdatblnks 22 jan_cash /Cdatblnks 23 jan_preexp /Cdatblnks 24 jan_consumable /Cdatblnks 25 jan_fequip /Cdatblnks 25 j
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Save the data for March
//BUBARCD
//Cdatblnks 1 mar_month
//Cdatblnks 2 mar_sales
//Cdatblnks 3 mar_stax
//Cdatblnks 3 mar_stax
//Cdatblnks 5 mar_purchases
//Cdatblnks 6 mar_customs
//Cdatblnks 6 mar_customs
//Cdatblnks 8 mar_inventory
//Cdatblnks 9 mar_sellexp
//Cdatblnks 10 mar_advertise
//Cdatblnks 11 mar_exbibit
//Cdatblnks 12 mar_semnars
//Cdatblnks 13 mar_salaries
//Cdatblnks 14 mar_utilities
//Cdatblnks 15 mar_travel
//Cdatblnks 16 mar_intexp
//Cdatblnks 17 mar_intax
//Cdatblnks 18 mar_other
//Cdatblnks 19 mar_dvds
//Cdatblnks 20 mar_casb
//Cdatblnks 21 mar_casb
//Cdatblnks 22 mar_casb
//Cdatblnks 23 mar_preexp
//Cdatblnks 23 mar_preexp
//Cdatblnks 23 mar_preexp
//Cdatblnks 25 mar_offequip
//Cdatblnks 25 mar_offequip
//Cdatblnks 25 mar_furniture
//Cdatblnks 25 mar_acctpay
//Cdatblnks 29 mar_taxpay
                                                                                                                                                                                                                                                                                                                            Save the data for February
 44
                                                                                                                               /RUjanuary
                                                                                                                                                                                                                                                                                                                            /RUfebruary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /EUmarch
45
46
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 70
  71
 72
                                                                                                                                                                                                                                                                                                                           /Cdatbloks 29 feb taxpay
```

G

C

1 3 4

72

B

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6
     8
   9
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   11
  12
   15
     16
   17
                                   TIUP
                                 Save & replace [MENUBRANCH PILE]
   18
                                                                                                                                                  Save to new file Exit w/o saving
 19
20
21
22
23
24
25
27
                                   ESC 2 MENU
  28
                                                                                                                                                                                                                            VIEW DATA (2)
                                                                                                                                                                                                                                                                                                                                                                                                                           UPDATE DATA (1)
                                 VIEW DATA (1)
                                 View data inputted for JanuaryView data inputted for July - Opdate data inputted for Janua [MENUBRANCH VIEW_DATA1] {MENUBRANCH VIEW_DATA2} {MENUBRANCH OPDATE_DATA1}
  29
  30
                                   [BSC2_DATA_INPUT]
                                                                                                                                                                                                                                [BSC2_DATA_INPUT]
  31
                                                                                                                                                                                                                                                                                                                                                                                                                            {BSC2_DATA_INPUT}
 32
33
34
35
 36
37
38
39
 40
41
42
                                                                                                                                                                                                                           SAY

(RUmay

(Cdatblnks_1 may_month)

(Cdatblnks_2 may_sales

(Cdatblnks_3 may_sales

(Cdatblnks_4 may_interest

(Cdatblnks_5 may_customs

(Cdatblnks_6 may_customs

(Cdatblnks_6 may_customs

(Cdatblnks_8 may_inventory

(Cdatblnks_9 may_sellesp

(Cdatblnks_10 may_advertise

(Cdatblnks_11 may_eshibit

(Cdatblnks_12 may_eshibit

(Cdatblnks_15 may_seminars

(Cdatblnks_15 may_seminars

(Cdatblnks_15 may_seminars

(Cdatblnks_15 may_interp

(Cdatblnks_16 may_interp

(Cdatblnks_18 may_other

(Cdatblnks_18 may_other

(Cdatblnks_19 may_dds

(Cdatblnks_20 may_casb

(Cdatblnks_20 may_casb

(Cdatblnks_22 may_acctrcybl

(Cdatblnks_23 may_pexp

(Cdatblnks_24 may_consumable

(Cdatblnks_23 may_consumable

(Cdatblnks_24 may_consumable

(Cdatblnks_25 may offeculp
                                 Save the data for April /RUapril
  43
                             Save the data for April
/RUapril
/Cdatblnks 1 apr_montb
/Cdatblnks 2 apr_sales
/Cdatblnks 3 apr_stax
/Cdatblnks 4 apr_interest
/Cdatblnks 5 apr_purchases
/Cdatblnks 6 apr_customs
/Cdatblnks 7 apr_freight
/Cdatblnks 8 apr_inventory
/Cdatblnks 10 apr_advertise
/Cdatblnks 11 apr_exbibit
/Cdatblnks 12 apr_seminars
/Cdatblnks 13 apr_salaries
/Cdatblnks 15 apr_travel
/Cdatblnks 16 apr_intexp
/Cdatblnks 17 apr_intexp
/Cdatblnks 16 apr_intexp
/Cdatblnks 17 apr_intax
/Cdatblnks 18 apr_other
/Cdatblnks 19 apr_cash
/Cdatblnks 20 apr_cash
/Cdatblnks 21 apr_bank
/Cdatblnks 22 apr_consumable
/Cdatblnks 23 apr_furniture
/Cdatblnks 23 apr_furniture
/Cdatblnks 25 apr_offequip
/Cdatblnks 25 apr_offequip
/Cdatblnks 25 apr_furniture
/Cdatblnks 27 apr_building
/Cdatblnks 28 apr_acctpag
/Cdatblnks 29 apr_taxpay
                                                                                                                                                                                                                               Save the data for May
                                                                                                                                                                                                                                                                                                                                                                                                                      Save the data for June

//BUjune
//Cdatblnks 1 jun_month
//Cdatblnks 2 jun_sales
//Cdatblnks 3 jun_stax
//Cdatblnks 4 jun_interest
//Cdatblnks 6 jun_customs
//Cdatblnks 6 jun_customs
//Cdatblnks 8 jun_inventory
//Cdatblnks 8 jun_inventory
//Cdatblnks 10 jun_advertise
//Cdatblnks 11 jun_exhibit
//Cdatblnks 12 jun_seminars
//Cdatblnks 13 jun_salaries
//Cdatblnks 13 jun_salaries
//Cdatblnks 15 jun_travel
//Cdatblnks 17 jun_intexp
//Cdatblnks 18 jun_otber
//Cdatblnks 19 jun_dvds
//Cdatblnks 19 jun_dvds
//Cdatblnks 20 jun_casb
//BVdatblnks 20 jun_casb
//Cdatblnks 21 jun_actrovhl
//Cdatblnks 22 jun_consumable
//Cdatblnks 23 jun_preexp
//Cdatblnks 24 jun_consumable
//Cdatblnks 25 jun_ferniture
//Cdatblnks 26 jun_furniture
//Cdatblnks 27 jun_building
//Cdatblnks 28 jun_acctpap
//Cdatblnks 29 jun_taxpay
//Cdatblnks 29 jun_taxpay
                                                                                                                                                                                                                                                                                                                                                                                                                           Save the data for June
 44
45
46
47
                                                                                                                                                                                                                                                                                                                                                                                                                           /BUjune
  48
45512345557899012345667
                                                                                                                                                                                                                            /Cdathibis 23 may preexp
/Cdathibis 24 may consumable
/Cdathibis 25 may offequip
/Cdathibis 26 may furniture
/Cdathibis 27 may building
/Cdathibis 28 may acctpay
/Cdathibis 28 may taxpay
 68
  10
  11
```

C 01234567890123456789012345678901234567890123456789012345678901234567890123

UPDATE DATA (2)
Update data inputted for July - December {MENUBRANCE UPDATE\_DATA2}
{BSC2\_DATA\_INPUT}

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0 screen L P Ť Q SBDSS • !!!!! SBDSS SBDSS SBDSS SBDSS screen\_corner

-blank\_area

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14
15
                                                                 Å
                                                                                                         /BVdatblnks 30 jan notespay
/Cdatblnks 31 jan longdebt
/Cdatblnks 32 jan capstock
/Cdatblnks 33 jan sbortborrow
/Cdatblnks 34 jan isscapstk
/Cdatblnks 35 jan sbortdebt
                                                                                                                                                                                                                                                                      /RVdatblnks 30 feb notespay
/Cdatblnks 31 feb longdebt
/Cdatblnks 32 feb capstock
/Cdatblnks 33 feb shortborrow
/Cdatblnks 34 feb isscapstk
/Cdatblnks 35 feb sbortdebt
                                                                                                                                                                                                                                                                                                                                                                                                                                    /RVdatblnks 30 mar notespay
/Cdatblnks 31 mar longdebt
/Cdatblnks 32 mar capstock
/Cdatblnks 33 mar shortborrow
/Cdatblnks 34 mar isscapstk
/Cdatblnks 35 mar shortdebt
 16
 18
19
                                                                                                          /RPjanuary
{RBCALC january}
/Cdata_entry jan_data
{BSC_2_MBNU}
                                                                                                                                                                                                                                                                         /BPfebruary

{BBCALC february}

/Cdata entry feb_data

{BSC_2_MBNU}
 80
                                                                                                                                                                                                                                                                                                                                                                                                                                        /RPsarch
 81
                                                                                                                                                                                                                                                                                                                                                                                                                                          RECALC march)
82
83
                                                                                                                                                                                                                                                                                                                                                                                                                                       /Cdata_entry_mar_data { ESC_2_MBNU}
 84
 85
                                                                                                                                                                                                                                                                                                                                                                                                                                    SEP
Save the data for September
/RUseptember
/Cdatblnks 1 sep_month
/Cdatblnks 2 sep_sales
/Cdatblnks 2 sep_sales
/Cdatblnks 3 sep_stax
/Cdatblnks 4 sep_interest
/Cdatblnks 6 sep_customs
/Cdatblnks 6 sep_freight
/Cdatblnks 7 sep_freight
/Cdatblnks 10 sep_advertise
/Cdatblnks 10 sep_saleris
/Cdatblnks 11 sep_exhibit
/Cdatblnks 12 sep_seminars
/Cdatblnks 12 sep_seminars
/Cdatblnks 13 sep_salaries
/Cdatblnks 14 sep_utilities
/Cdatblnks 15 sep_travel
/Cdatblnks 16 sep_interp
/Cdatblnks 17 sep_intar
/Cdatblnks 18 sep_other
/Cdatblnks 19 sep_other
/Cdatblnks 19 sep_other
/Cdatblnks 20 sep_casb
/Rydatblnks 21 sep_bank
/Cdatblnks 22 sep_acctrcvbl
/Cdatblnks 23 sep_preexp
/Cdatblnks 25 sep_frequip
/Cdatblnks 25 sep_frequip
/Cdatblnks 26 sep_frequip
/Cdatblnks 27 sep_building
/Cdatblnks 27 sep_building
/Cdatblnks 31 sep_longdebt
/Cdatblnks 31 sep_longdebt
/Cdatblnks 33 sep_sbortborrow
/Cdatblnks 34 sep_isscapstk
/Cdatblnks 35 sep_shortdebt
/RPseptember
/RECALC september
/RECALC september
                                                                                                      JUL
Save tbe data for July
/RUjuly
/RUjuly
/Cdatblnks 1 jul month
/Cdatblnks 2 jul sales
/Cdatblnks 3 jul stax
/Cdatblnks 5 jul purchases
/Cdatblnks 6 jul custoss
/Cdatblnks 6 jul custoss
/Cdatblnks 7 jul freight
/Cdatblnks 9 jul inventory
/Cdatblnks 10 jul advertige
/Cdatblnks 11 jul exbibit
/Cdatblnks 12 jul mellerp
/Cdatblnks 13 jul salaries
/Cdatblnks 14 jul utilities
/Cdatblnks 15 jul travel
/Cdatblnks 18 jul otber
/Cdatblnks 18 jul otber
/Cdatblnks 18 jul otber
/Cdatblnks 20 jul casb
/Cdatblnks 25 jul captobl
/Cdatblnks 25 jul furniture
/Cdatblnks 26 jul furniture
/Cdatblnks 28 jul offequip
/Cdatblnks 28 jul offequip
/Cdatblnks 29 jul furniture
/Cdatblnks 29 jul taxpay
/RYdatblnks 30 jul notespay
/Cdatblnks 31 jul longdebt
/Cdatblnks 32 jul captock
/Cdatblnks 33 jul shortborrov
/Cdatblnks 34 jul isscapstk
/Cdatblnks 35 jul shortdebt
/RPjuly
/RECALC july
/RECALC july
/RECALC july
/RECALC july
//RECALC july
//RECAL
                          PLACE DATA2
                                                                                                         Save the data for July
                                                                                                                                                                                                                                                                        Save the data for August
                                                                                                                                                                                                                                                                                                                                                                                                                                      Save the data for September
                                                                                                                                                                                                                                                                     /RUaugust
/Cdatblnks 1 aug montb
/Cdatblnks 2 aug sales
/Cdatblnks 3 aug stax
/Cdatblnks 3 aug stax
/Cdatblnks 5 aug purchases
/Cdatblnks 6 aug customs
/Cdatblnks 7 aug freight
/Cdatblnks 8 aug inventory
/Cdatblnks 9 aug sellexp
/Cdatblnks 10 aug advertige
/Cdatblnks 11 aug exhibit
/Cdatblnks 12 aug seminars
/Cdatblnks 13 aug salaries
/Cdatblnks 14 aug utilities
/Cdatblnks 15 aug travel
/Cdatblnks 15 aug intexp
/Cdatblnks 16 aug intexp
/Cdatblnks 17 aug intex
/Cdatblnks 18 aug otber
/Cdatblnks 19 aug dvds
/Cdatblnks 20 aug cash
/RVdatblnks 21 aug bank
/Cdatblnks 22 aug acctrcybl
/Cdatblnks 23 aug frequip
/Cdatblnks 24 aug consumable
/Cdatblnks 25 aug offequip
/Cdatblnks 25 aug offequip
/Cdatblnks 28 aug furniture
/Cdatblnks 29 aug taxpay
/Cdatblnks 29 aug taxpay
/Cdatblnks 31 aug incespay
/Cdatblnks 32 aug shortborrow
/Cdatblnks 33 aug shortborrow
/Cdatblnks 33 aug shortborrow
/Cdatblnks 35 aug sbortdebt
/RPaugust
/RECALC august
                                                                                                                                                                                                                                                                        /RUaugust
/Cdatblnks_l_aug_montb
 88
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105
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121
122
                                                                                                           RECALC july
                                                                                                                                                                                                                                                                          (RPaugust | RBCALC august)
                                                                                                                                                                                                                                                                                                                                                                                                                                         (RPseptember
(RBCALC september)
 12:
125
 126
                                                                                                           /Cdata_entry jul_data*
{BSC_2_MBNU}
                                                                                                                                                                                                                                                                          /Cdata_entry aug_data*
| BSC 2 | BNU |
                                                                                                                                                                                                                                                                                                                                                                                                                                        /Cdata_entry*sep_data*
{BSC 2 WBNU}
 127
 128
 129
                          VIBW DATAL
130
                                                                                                                                                                                                                                                                                                                                                                                                                                      View the data for March (GOTO) mar_data
 131
                                                                                                          View the data for January
                                                                                                                                                                                                                                                                        View the data for February
 132
                                                                                                           [GOTO] jan_data
                                                                                                                                                                                                                                                                        [GOTO] feb_data
 133
 134
 135
                          VIBW DATA2
                                                                                                         View the data for July (GOTO) jul_data
                                                                                                                                                                                                                                                                         View the data for August
                                                                                                                                                                                                                                                                                                                                                                                                                                      View the data for September (GOTO) sep_data
 136
 137
                                                                                                                                                                                                                                                                         (GOTO) aug data
 138
 139
                          UPDATE DATAL
 140
                                                                                                         Save the data for January
                                                                                                                                                                                                                                                                        Save the data for Pebruary
                                                                                                                                                                                                                                                                                                                                                                                                                                      Save the data for March
                                                                                                         /RUjanuary
/Cjan_datblnks datblnks
                                                                                                                                                                                                                                                                        /RUfebruary
/Cfeb_datblnks datblnks
                                                                                                                                                                                                                                                                                                                                                                                                                                        /RUmarch
 142
                                                                                                                                                                                                                                                                                                                                                                                                                                       /Coar datbloks datbloks
 143
                                                                                                                                                                                                                                                                       /Cdatblnks 1 feb montb /Cdatblnks 2 feb sales /Cdatblnks 3 feb star
                                                                                                                                                                                                                                                                                                                                                                                                                                     /Cdatbinks_1 mar_month
/Cdatbinks_2 mar_sales
/Cdatbinks_3 mar_stax
                                                                                                         /Cdatblnks_1 jan_month
/Cdatblnks_2 jan_sales
/Cdatblnks_3 jan_stax
 144
 145
```

```
/RVdatblnks 30 apr_notespay //Cdatblnks 31 apr_longdebt //Cdatblnks 32 apr_capstock //Cdatblnks 33 apr_shortborrow //Cdatblnks 34 apr_isscapstk //Cdatblnks 35 apr_sbortdebt //Cdatblnks 35 ap
                                                                                                                                                                                                                            /RVdatblnks 30 may notespay
/Cdatblnks 31 may longdebt
/Cdatblnks 32 may capstock
/Cdatblnks 33 may shortborrow
/Cdatblnks 34 may isscapstk
/Cdatblnks 35 may sbortdebt
                                                                                                                                                                                                                                                                                                                                                                                                                          /RVdatblnks 30 jun_notespay
/Cdatblnks 31 jun_longdebt
/Cdatblnks 32 jun_capstock
/Cdatblnks 32 jun_shortborrow
/Cdatblnks 34 jun_isscapstk
/Cdatblnks 35 jun_shortdebt
   74
75
   78
 80
                                   /RPapril (RBCALC april)
                                                                                                                                                                                                                              (RPmay | RECALC may)
                                                                                                                                                                                                                                                                                                                                                                                                                             /RPjune
{RBCALC june}
                                                                                                                                                                                                                                                                                                                                                                                                                             Cdata_entry jun_data {BSC_2_MENU}
   82
83
                                 /Cdata_entry apr_data (BSC_2_MBNU)
                                                                                                                                                                                                                                /Cdata_entry may_data 
{BSC_2_MBNU}
 84
85
86
87
88
                                                                                                                                                                                                                                                                                                                                                                                                                   Save the data for December

// Rudecember
// Cdatbloks 1 dec_month
// Cdatbloks 2 dec_sales
// Cdatbloks 3 dec_stax
// Cdatbloks 3 dec_stax
// Cdatbloks 5 dec_interest
// Cdatbloks 5 dec_customs
// Cdatbloks 6 dec_customs
// Cdatbloks 7 dec_freight
// Cdatbloks 8 dec_inventory
// Cdatbloks 9 dec_sellexp
// Cdatbloks 10 dec_advertise
// Cdatbloks 11 dec_exbibit
// Cdatbloks 12 dec_seminars
// Cdatbloks 13 dec_salaries
// Cdatbloks 14 dec_utilities
// Cdatbloks 15 dec_travel
// Cdatbloks 16 dec_intexp
// Cdatbloks 17 dec_intax
// Cdatbloks 18 dec_other
// Cdatbloks 20 dec_cash
// Cdatbloks 21 dec_bank
// Cdatbloks 22 dec_cactrcvbl
// Cdatbloks 23 dec_crexp
// Cdatbloks 24 dec_consumable
// Cdatbloks 25 dec offequip
// Cdatbloks 25 dec furniture
// Cdatbloks 25 dec furniture
// Cdatbloks 27 dec_building
// Cdatbloks 29 dec taxpay
// Cdatbloks 29 dec taxpay
// Cdatbloks 31 dec_building
// Cdatbloks 31 dec_sbortborrow
// Cdatbloks 31 dec_sbortborrow
// Cdatbloks 33 dec_sbortborrow
// Cdatbloks 35 dec_sbortborrow
                                                                                                                                                                                                                         Save the data for November /RUnovember /RUnovember /Cdatblaks 1 nov month /Cdatblaks 1 nov month /Cdatblaks 3 nov sales /Cdatblaks 3 nov stax /Cdatblaks 5 nov purchases /Cdatblaks 6 nov customs /Cdatblaks 7 nov freight /Cdatblaks 9 nov sellerp /Cdatblaks 9 nov sellerp /Cdatblaks 10 nov advertige /Cdatblaks 11 nov exhibit /Cdatblaks 12 nov seminars /Cdatblaks 13 nov salaries /Cdatblaks 14 nov utilities /Cdatblaks 15 nov travel /Cdatblaks 16 nov interp /Cdatblaks 17 nov interp /Cdatblaks 18 nov other /Cdatblaks 19 nov dvds /Cdatblaks 21 nov interp /Cdatblaks 22 nov cash /RVdatblaks 22 nov acctrevbl /Cdatblaks 23 nov preexp /Cdatblaks 25 nov offequip /Cdatblaks 25 nov offequip /Cdatblaks 27 nov building /Cdatblaks 28 nov acctpay /Cdatblaks 29 nov tarpay /RVdatblaks 31 nov longdebt /Cdatblaks 31 nov longdebt /Cdatblaks 31 nov longdebt /Cdatblaks 33 nov sbortdebt /Cdatblaks 33 nov sbortdebt /RPoovember /RECALC november}
                           RVoctober

/RUoctober
/Cdatblnks_1 oct_montb
/Cdatblnks_2 oct_sales
/Cdatblnks_3 oct_stax
/Cdatblnks_5 oct_purchases
/Cdatblnks_5 oct_purchases
/Cdatblnks_6 oct_customs
/Cdatblnks_6 oct_customs
/Cdatblnks_7 oct_freight
/Cdatblnks_7 oct_sellerp
/Cdatblnks_10 oct_sellerp
/Cdatblnks_10 oct_advertige
/Cdatblnks_11 oct_enhibit
/Cdatblnks_12 oct_seminars
/Cdatblnks_13 oct_salaries
/Cdatblnks_14 oct_utilities
/Cdatblnks_15 oct_travel
/Cdatblnks_15 oct_travel
/Cdatblnks_16 oct_interp
/Cdatblnks_18 oct_otber
/Cdatblnks_18 oct_otber
/Cdatblnks_19 oct_dvds
/Cdatblnks_20 oct_casb
/RVdatblnks_21 oct_bank
/Cdatblnks_23 oct_recerp
/Cdatblnks_25 oct_offequip
/Cdatblnks_25 oct_offequip
/Cdatblnks_27 oct_building
/Cdatblnks_28 oct_acctroyl
/Cdatblnks_29 oct_tarpay
/Cdatblnks_31 oct_notespay
/Cdatblnks_31 oct_longdebt
/Cdatblnks_31 oct_longdebt
/Cdatblnks_32 oct_capstock
/Cdatblnks_33 oct_sbortborrow
/Cdatblnks_33 oct_sbortborrow
/Cdatblnks_35 oct_sbortdebt
/RPoctober
/RPCALC october}
                                Save the data for October /RUoctober
                                                                                                                                                                                                                                                                                                                                                                                                                          Save the data for December /RUdecember
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                                                                                                                                                                                                                              /RUnovember
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                                    RPoctober
                                 RECALC october
                                                                                                                                                                                                                                RECALC november]
                                                                                                                                                                                                                                                                                                                                                                                                                              RECALC december)
                                                                                                                                                                                                                              /Cdata_entry_nov_data*
{BSC_2_MBNU}
                                                                                                                                                                                                                                                                                                                                                                                                                           Cdata_entry_dec_data^
{BSC_2_MENU}
126
127
                                /Cdata_entry oct_data 
[BSC_2_MENU]
128
129
 130
131
132
                                View the data for April
                                                                                                                                                                                                                                                                                                                                                                                                                           View the data for June
                                                                                                                                                                                                                              View the data for May
                                                                                                                                                                                                                                                                                                                                                                                                                          (GOTO) jun_data
                                                                                                                                                                                                                             (GOTO) may data
                               [GOTO]apr_data
 133
134
                                                                                                                                                                                                                              View the data for Movember
                                                                                                                                                                                                                                                                                                                                                                                                                          View the data for December
 136
                                View the data for October
  137
                                                                                                                                                                                                                             {GOTO}nov_data
                                                                                                                                                                                                                                                                                                                                                                                                                          [GOTO] dec_data
                               [GOTO]oct_data
 138
 139
 140
                                                                                                                                                                                                                             MAY
                                                                                                                                                                                                                                                                                                                                                                                                                         Save the data for June
                               Save the data for April
                                                                                                                                                                                                                             Save the data for May
 141
                                                                                                                                                                                                                            /RUmay
/Comay datbloks datbloks
/Cdatbloks 1 may month
/Cdatbloks 2 may sales
                                                                                                                                                                                                                                                                                                                                                                                                                           /RUjune
                                /RUapril
                               /Capr datblnks datblnks /Cabr datblnks lapr month /Cdatblnks lapr month /Cdatblnks 2 apr sales /Cdatblnks 3 apr stax
                                                                                                                                                                                                                                                                                                                                                                                                                          /Cjun_datbloks datbloks
  143
                                                                                                                                                                                                                                                                                                                                                                                                                         /Cdatblnks_1 jun_montb
/Cdatblnks_2 jun_sales
/Cdatblnks_3 jun_stax
                                                                                                                                                                                                                             /Cdatbloks_3 may_stax
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/Cdatblaks 6 mar_interest*
/Cdatblaks 5 mar_purcbases
/Cdatblaks 5 mar_purcbases
/Cdatblaks 6 mar_custoss
/Cdatblaks 7 mar_freight
/Cdatblaks 8 mar_inventory
/Cdatblaks 9 mar_sellerp
/Cdatblaks 10 mar_advertise
/Cdatblaks 11 mar_exhibit
/Cdatblaks 12 mar_seminars
/Cdatblaks 13 mar_salaries
/Cdatblaks 15 mar_travel
/Cdatblaks 16 mar_interp
/Cdatblaks 16 mar_interp
/Cdatblaks 19 mar_dvds
/Cdatblaks 19 mar_dvds
/Cdatblaks 20 mar_casb
/Rydatblaks 20 mar_casb
/Rydatblaks 21 mar_bsak
/Cdatblaks 22 mar_consumable
/Cdatblaks 23 mar_preexp
/Cdatblaks 23 mar_preexp
/Cdatblaks 25 mar_offequip
/Cdatblaks 25 mar_offequip
/Cdatblaks 25 mar_consumable
/Cdatblaks 28 mar_acctroyl
/Cdatblaks 28 mar_acctpay
/Cdatblaks 28 mar_acctpay
/Cdatblaks 32 mar_bootdore
/Cdatblaks 32 mar_longdebt
/Cdatblaks 32 mar_longdebt
/Cdatblaks 33 mar_sbortborrow
/Cdatblaks 33 mar_sbortborrow
/Cdatblaks 33 mar_sbortdebt
/RPmarch
/RECALC march
                                                                                                                                                                 /Cdatblnks_4 jan_interest
/Cdatblnks_5 jan_purcbases
/Cdatblnks_6 jan_customs
/Cdatblnks_6 jan_customs
/Cdatblnks_6 jan_customs
/Cdatblnks_7 jan_freight
/Cdatblnks_9 jan_sellerp
/Cdatblnks_10 jan_advertise
/Cdatblnks_11 jan_exbibit
/Cdatblnks_12 jan_seminars
/Cdatblnks_13 jan_salsries
/Cdatblnks_14 jan_utilities
/Cdatblnks_15 jan_intexp
/Cdatblnks_16 jan_intexp
/Cdatblnks_18 jan_other
/Cdatblnks_19 jan_dvds
/Cdatblnks_19 jan_dvds
/Cdatblnks_20 jan_casb
/RVdatblnks_21 jan_bank
/Cdatblnks_22 jan_acctrcvbl
/Cdatblnks_23 jan_cexp
/Cdatblnks_25 jan_offequip
/Cdatblnks_25 jan_fequip
/Cdatblnks_26 jan_furniture
/Cdatblnks_29 jan_turniture
/Cdatblnks_29 jan_sporteborrow
/Cdatblnks_30 jan_sporteborrow
/Cdatblnks_31 jan_sporteborrow
/Cdatblnks_33 jan_sbortdebt
/RPjanuary
/RCdatLC january
/RCdLC january
/RCdLC january
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178
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{RECALC march}
{GOTO) warning
{PRAMBOFF}
{GOTO warning corner
{WAIT @NOW-@TIME(0,0,5)}
{BSC_2_MEMU}
                                                                                                                                                                      (RPjanuary | RECALC january)
179
                                                                                                                                                                                                                                                                                                                                                                                                                               /RPfebruary
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181
                                                                                                                                                                           GOTO warning
                                                                                                                                                                           PRAMBOPP)
182
                                                                                                                                                                         GOTO warning corner WAIT enow-etime(0,0,5))
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186
187
                                       UPDATE_DATA2
188
                                                                                                                                                             Save the data for August
189
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//BUagust*
//Caug datblnks datblnks*
//Cdatblnks laug montb
//Cdatblnks laug montb
//Cdatblnks laug montb
//Cdatblnks laug sales
//Cdatblnks laug star
//Cdatblnks laug star
//Cdatblnks laug interest
//Cdatblnks laug purchases
//Cdatblnks laug customs
//Cdatblnks laug inventory
//Cdatblnks laug sellexp
//Cdatblnks laug s
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Save the data for September
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Save the data for September / RUseptember / Cosep datbloks datbloks / Cosep datbloks datbloks / Cosep datbloks 2 sep sales / Codatbloks 2 sep sales / Codatbloks 3 sep sales / Codatbloks 5 sep junchases / Codatbloks 5 sep junchases / Codatbloks 6 sep customs / Codatbloks 7 sep freight / Codatbloks 8 sep inventory / Codatbloks 9 sep inventory / Codatbloks 10 sep salesp / Codatbloks 10 sep salesp / Codatbloks 11 sep seniours / Codatbloks 12 sep seniours / Codatbloks 14 sep seniours / Codatbloks 14 sep seniours / Codatbloks 16 sep interp / Codatbloks 16 sep interp / Codatbloks 18 sep other / Codatbloks 18 sep coder / Codatbloks 20 sep casb / RVodatbloks 20 sep casb / RVodatbloks 21 sep bank / Codatbloks 22 sep sectrovb / Codatbloks 24 sep consumable / Codatbloks 25 sep furniture / Codatbloks 25 sep furniture / Codatbloks 25 sep furniture / Codatbloks 26 sep furniture / Codatbloks 28 sep sectpay
                                                                                                                                                                    /RUjuly
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190
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/Cdatblnks 4 apr interest
/Cdatblnks 5 apr purchases
/Cdatblnks 6 apr customs
/Cdatblnks 6 apr customs
/Cdatblnks 7 apr freight
/Cdatblnks 10 apr sellerp
/Cdatblnks 10 apr advertise
/Cdatblnks 11 apr exhibit
/Cdatblnks 12 apr seminars
/Cdatblnks 13 apr salaries
/Cdatblnks 14 apr utilities
/Cdatblnks 15 apr travel
/Cdatblnks 16 apr interp
/Cdatblnks 17 apr interp
/Cdatblnks 19 apr dvds
/Cdatblnks 20 apr cash
/RVdatblnks 21 apr bank
/Cdatblnks 22 apr acctrcybl
/Cdatblnks 22 apr acctrcybl
/Cdatblnks 22 apr acctrcybl
/Cdatblnks 24 apr consumable
/Cdatblnks 25 apr furniture
/Cdatblnks 26 apr furniture
/Cdatblnks 27 apr bank
/Cdatblnks 28 apr acctpay
/Cdatblnks 28 apr acctpay
/Cdatblnks 29 apr capstock
/Cdatblnks 30 apr notespay
/Cdatblnks 31 apr longdebt
/Cdatblnks 32 apr capstock
/Cdatblnks 33 apr sbortborrow
/Cdatblnks 33 apr sbortdebt
/RPapril
/RPCALC april
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/Cdatblnks_4 jun_interest
/Cdatblnks_5 jun_purcbases
/Cdatblnks_6 jun_customs
/Cdatblnks_7 jun_freight
/Cdatblnks_8 jun_inventory
/Cdatblnks_9 jun_sellexp
/Cdatblnks_10 jun_advertise
/Cdatblnks_11 jun_exbibit
/Cdatblnks_12 jun_seminars
/Cdatblnks_13 jun_seminars
/Cdatblnks_13 jun_seminars
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/Cdatblnks 5 may purchases
/Cdatblnks 6 may customs
/Cdatblnks 7 may freight
/Cdatblnks 7 may freight
/Cdatblnks 9 may sellexp
/Cdatblnks 10 may advertise
/Cdatblnks 11 may exhibit
/Cdatblnks 12 may selners
/Cdatblnks 12 may selners
/Cdatblnks 13 may selners
/Cdatblnks 16 may intexp
/Cdatblnks 16 may intexp
/Cdatblnks 18 may other
/Cdatblnks 19 may dds
/Cdatblnks 20 may cash
/RVdatblnks 21 may bank
/Cdatblnks 22 may consumable
/Cdatblnks 23 may preexp
/Cdatblnks 25 may offeguip
/Cdatblnks 25 may furniture
/Cdatblnks 25 may furniture
/Cdatblnks 28 may consumable
/Cdatblnks 28 may rectpay
/Cdatblnks 29 may taxpay
/Cdatblnks 29 may taxpay
/Cdatblnks 31 may longdebt
/Cdatblnks 32 may notespay
/Cdatblnks 32 may notespay
/Cdatblnks 33 may notespay
/Cdatblnks 32 may notespay
/Cdatblnks 33 may notespay
                                                          /Cdatblaks_4 apr_interest
      147
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      148
      150
    151
152
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155
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/Cdatblaks 12 jun seminars
/Cdatblaks 13 jun salaries
/Cdatblaks 15 jun travel
/Cdatblaks 15 jun travel
/Cdatblaks 15 jun intexp
/Cdatblaks 15 jun intexp
/Cdatblaks 17 jun intexp
/Cdatblaks 18 jun other
/Cdatblaks 19 jun dyds
/Cdatblaks 20 jun cash
/RVdatblaks 21 jun bank
/Cdatblaks 22 jun acctrcvbl
/Cdatblaks 23 jun prexp
/Cdatblaks 23 jun prexp
/Cdatblaks 25 jun offeguir
/Cdatblaks 25 jun offeguir
/Cdatblaks 27 jun building
/Cdatblaks 28 jun curpay
/Cdatblaks 29 jun taxpsy
/RVdatblaks 30 jun notespay
/Cdatblaks 31 jun longdebt
/Cdatblaks 33 jun sbortborrow
/Cdatblaks 33 jun sbortborrow
/Cdatblaks 33 jun sbortborrow
/Cdatblaks 35 jun sbortdebt
/RPjune
/RALC junes
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/Cdatblnks 33 may sbortborrow
/Cdatblnks 34 may isscapstk
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178
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179
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[RECALC may]
                                                          /RPapril
                                                             RECALC april)
GOTO warning
180
181
                                                                                                                                                                                                                                                                                                                                                                                                        GOTOjwarning
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                                                               PRANEOFF)
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182
                                                                                                                                                                                                                                                                                                                                                                                                          PRAMBOPP)
                                                                                                                                                                                                                                                                                                                                                                                                   GOTO warning corner [WAIT @NOW+@TIME(0,0,5)] [BSC_2_MBNU]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GOTO warning corner [WAIT @NOW+@TIME(0,0,5)] [BSC_2_MBNU]
                                                               GOTO warning corner WAIT enow-etime(0,0,5)}
183
184
                                                        BSC 2 MENU}
185
186
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188
                                                    Save the data for October
                                                                                                                                                                                                                                                                                                                                                                                               Save the data for November
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Save the data for December
189
                                               /RUoctober // RUoctober // RUoctober // RUoctober // Cott_datblnks loct_montb // Cdatblnks loct_montb // Cdatblnks loct_montb // Cdatblnks loct_sales // Cdatblnks loct_sales // Cdatblnks loct_interest // Cdatblnks loct_customs // Cdatblnks loct_customs // Cdatblnks loct_freight // Cdatblnks loct_saleries // Cdatblnks
190
                                                      /RUoctober
                                                                                                                                                                                                                                                                                                                                                                                          /RUnovember //Coov datblnks datblnks //Cdatblnks 1 nov month //Cdatblnks 2 nov month //Cdatblnks 3 nov star //Cdatblnks 5 nov purchases //Cdatblnks 5 nov purchases //Cdatblnks 6 nov customs //Cdatblnks 7 nov freight //Cdatblnks 8 nov inventory //Cdatblnks 10 nov movembory //Cdatblnks 12 nov movembory //Cdatblnks 13 nov movembory //Cd
                                                                                                                                                                                                                                                                                                                                                                                                 /RUnovember
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/Cdet datblnks | dec month
/Cdatblnks | dec month
/Cdatblnks | dec month
/Cdatblnks | dec month
/Cdatblnks | dec sales
/Cdatblnks | dec star
/Cdatblnks | dec star
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191
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192
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/Cdatblnts 14 nov utilities
/Cdatblnts 15 nov travel
/Cdatblnts 16 nov intexp
/Cdatblnts 17 nov intex
204
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208
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/Cdatbinks 18 nov other
/Cdatbinks 19 nov dvds
/Cdatbinks 20 nov casb
/Evdatbinks 21 nov bank
/Cdatbinks 22 nov acctrcvbl
/Cdatbinks 23 nov preexp
/Cdatbinks 24 nov consumable
/Cdatbinks 25 nov offequip
/Cdatbinks 25 nov furniture
209
210
211
                                                 /Cdatblnks 20 oct cash / RVdatblnks 21 oct bank / Cdatblnks 22 oct acctrevbl / Cdatblnks 23 oct preexp / Cdatblnks 24 oct consumable / Cdatblnks 25 oct offegurp / Cdatblnks 26 oct furniture / Cdatblnks 27 oct building / Cdatblnks 28 oct acctpay
212
213
214
215
216
                                                                                                                                                                                                                                                                                                                                                                                             /Cdatblnks_26 nov_furniture
/Cdatblnks_27 nov_building
/Cdatblnks_28 nov_acctpay
217
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/Cdatblnks_29° iul_taxpay*
/Rvdatblnks_30° jul_notespay*
/Cdatblnks_31° jul_longdebt
/Cdatblnks_32° jul_capstock*
/Cdatblnks_33° jul_shortborrow
/Cdatblnks_34° jul_isscapstk*
/Rejuly*
  C
                   å
                                                                              /Cdatblnks 29 aug taxpay
/RVdatblnks 30 aug notespay
/Cdatblnks 31 aug longdebt
/Cdatblnks 32 aug capstock
/Cdatblnks 33 aug shortborrow
/Cdatblnks 34 aug isscapstk
/Cdatblnks 35 aug shortdebt
/RPaugust
                                                                                                                             /Cdatblnks 29 gep_taxpay

/RVdatblnks 30 sep_motespay

/Cdatblnks 31 sep_longdebt

/Cdatblnks 32 sep_capstock

/Cdatblnks 33 sep_shortborrow

/Cdatblnks 34 sep_isscapstk

/Cdatblnks 35 sep_shortdebt
220
221
222
224
226
227
                                                                                                                              /Cattoines 33 sep_shortd

/REsetaber

| RECALC september |

| GOTO | warning |

| FRAMEOFF |

| GOTO | warning | corner |

| WAIT | ENOW+ETIME | (0,0,5 | )

| ESC_2 | WEMU |
                                RPjuly
RBCALC july
GOTO warning
                                                                               RPaugust | RBCALC august |
228
229
230
                                                                                GOTO | warning | FRAMBOFF |
                                 PRAMEOPP
                                                                               GOTO warning corner WAIT GNOW+CTIME(0,0,5)}
[BSC_2_MENU]
                                GOTO warning corner [WAIT ENOW+ETIME[0,0,5]] [BSC_2_MBNU]
231
232
234
236
                               VIEW (1)
View the financial reports forView the financial reports forPrint the financial reports forWigw_REPORTS1}

WEMUBRANCH VIEW_REPORTS1}

WEMUBRANCH VIEW_REPORTS2}

WEMUBRANCH VIEW_REPORTS1}
238
       REPORTS
239
240
241
                                BSC 2 REPORTS
                                                                               ESC 2 REPORTS
                                                                                                                              ESC 2 REPORTS
                               GOTO screen GOTO screen corner FRAMEOFF HENUBRANCH REPORTS
        ESC 2 REPORTS
244
246
247
                                ESC_2_MENU}
        VIEW REPORTS!
                                                                                                                             MAR
                               Scroll to view all financial rScroll to view all financial rScroll to view all financial r [GOTO]january [GOTO]march
250
251
                               [GOTO] january
252
        VIEW REPORTS2
                                                                               AUG
                               Scroll to view all financial rScroll to view all financial rScroll to view all financial r
256
                                {GOTO}july
                                                                                                                              {GOTO}september
                                                                               [GOTO] august
257
258
       PRINT REPORTS! JAN
                               259
260
261
       PRINT REPORTS2 JUL
263
                               264
265
266
267
       PLOTS
                                                                               PRINT PLOTS
268
                               269
270
271
272
273
        BSC_2_PLOTS
                                [GOTO] screen
                                GOTO screen_corner*
274
275
                                {MENUBRANCH PLOTS}
{BSC_2_MENU}
276
217
278
                                                                                                                             RETURN ON CAPITAL [1]
        AIRA PLOT
                               MARGIN $ {1}
                                                                              WARGIN % (2)
279
                                View a plot of the Margin % enview a plot of the Margin % enview a plot of the Return on C {MENUBRANCH MONTHI} {MENUBRANCH MONTHI}
280
281
282
283
                                BSC 2 VUPLOT
                                                                               ESC_2_VUPLOT
                                                                                                                              [BSC_2_VUPLOT]
284
285
        ESC 2 VUPLOT
                                [GOTO]screen
                                GOTO Screen_corner
| PRAMEOFF |
| WENUBRANCH VIEW_PLOT |
286
287
288
                                ESC 2 PLOTS
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291
        SCRATCE AREA
                                                                        BRR
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Z20 /Cdatblnks 29°cct taxpay°
Z21 /RVdatblnks 30°cct sotespay°
Z22 /Cdatblnks 31°cct Iongdebt°
Z23 /Cdatblnks 31°cct Longdebt°
Z24 /Cdatblnks 33°cct shortborrow°
Z24 /Cdatblnks 33°cct shortborrow°
Z25 /Cdatblnks 35°cct sbortdebt°
Z26 /Cdatblnks 35°cct sbortdebt°
Z27 /RPoctober
  C
                                                                                                                                     /Cdatblnks 29 dec_taxpay /RVdatblnks 30 dec_notespay /Cdatblnks 31 dec_longdebt /Cdatblnks 31 dec_capstock /Cdatblnks 33 dec_shortborrow /Cdatblnks 34 dec_isscapstk /Cdatblnks 35 dec_shortdebt /RPdecesber
                                                                       /Cdatblnks_29 pov_tarpay
/RVdatblnks_30 nov notespay
/Cdatblnks_31 nov_longdebt
                                                                       /Cdatblnks_32_nov_capstock
//Cdatblnks_33_nov_sbortborrow
//Cdatblnks_34_nov_sbortborrow
//Cdatblnks_35_nov_sbortdebt
//Cdatblnks_35_nov_sbortdebt
//RPnovesber
226
227
           /RPoctober
                                                                                                                                      /RPdecember
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232
                                                                         RECALC november)
                                                                                                                                      (RBCALC december)
(GOTO) warning
            RECALC october
           GOTO | Warning
            PRAMEOPP)
                                                                         PRAMBOPPI
                                                                                                                                       FRANKOPP)
          GOTO | warning corner | wait enousetime (0,0,5) | ESC_2_MENU|
                                                                        GOTO Warning corner [WAIT ENOW+ETIME(0,0,5)]
[ESC_2_MENU]
                                                                                                                                      GOTO Warbing corner { WAIT eNOW+eTIME(0,0,5)} { ESC_2_MENU}
233
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         PRINT {2}
Print the financial reports for July - December
238
239
          {MENUBRANCE PRINT_REPORTS2}

[BSC_2_REPORTS]
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         Scroll to view all financial rScroll to view all financial rScroll to view all financial r [GOTO]april [GOTO]may [GOTO]june
250
251
252
253
254 OCT
255 Scro
         Scroll to view all financial rScroll to view all financial rScroll to view all financial r [GOTO]october [GOTO]november [GOTO]december
256
257
         [GOTO]october
258
259
          Print all financial reports formint all financial reports formint all financial reports fo
                                                                        (PPCARmay AGO | BSC_2_REPORTS)
         (PPCARapril AGG
(BSC_2_REPORTS)
                                                                                                                                      /PPCARjube AGG BSC_2_REPORTS)
260
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263 OCT
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264 Print all financial reports foPrint all financial reports foPrint all financial reports fo
265 /PPCARoctober AGQ /PPCARbovesber AGQ /PPCARdecesber AGQ
266 (BSC_2_REPORTS) {BSC_2_REPORTS}
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          RETURN ON CAPITAL (2)
                                                                        ASSET TURNOVER (1)
                                                                                                                                     ASSET TURNOVER (2)
         View a plot of the Return on CView a plot of the Asset Turnoview a plot of the Asset Turno (MENUBRANCH MONTHS) (MENUBRANCH MONTHS) (MENUBRANCH MONTHS) (MENUBRANCH MONTHS) (MESC_2_VUPLOT)
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292

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I eports for December X OF GROSS MARGIN ON SALES (1)X OF GROSS MARGIN ON SALES (2)
View a plot of the X Gross Marylew a plot of the X Gross Margin on Sales endin
{#ENUBRANCH MONTHOT}
{#ESC\_2\_VUPLOT}

RSC\_2\_VUPLOT} ERR BRR RRR ERR

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g in July - December

BRR BRR

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/BVieb margin scratch al
/BVmar margin scratch al
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/BVmay margin scratch a4
/BVjun margin scratch a6
/BVjun margin scratch a7
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/BVoot margin scratch a9
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/RVmar_margis_scratch_a12
/RVmay_margis_scratch_a2
/RVjun_margis_scratch_a3
/RVjun_margis_scratch_a4
/RVjun_margis_scratch_a4
/RVjun_margis_scratch_a4
/RVjun_margis_scratch_a5
/RVsep_margis_scratch_a6
/RVoct_margis_scratch_a6
/RVoct_margis_scratch_a7
/RVoov_margis_scratch_a9
/GRGTBAscratch_area
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ESC_2_VUPLOT}
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/RUmar_margin_scratch_a9
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/RVmar_margin_scratch_a6
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/RVjul_margin_scratch_a10
/RVaug_margin_scratch_a11
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/RVoct_margin_scratch_al
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/GRGTbAscratch_area
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 334
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/RVjun return scratch a3
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/RVjul_return_scratch_a5/
/RVsep_return_scratch_a6/
/RVoct_return_scratch_a8/
/RVdc_return_scratch_a8/
/RVdc_return_scratch_a9/
/RVdc_return_scratch_a9/
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RSC_2_VUPLOT
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                View a plot for May through Apview a plot for June through Mview a plot for July through J
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               /RVjan margin scratch a9
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/RVfeh margin scratch a8
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 297
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 298
299
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/RVmar_margin_scratch_a10
               /RVapr margin scratch al?
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 309
                /GRGTBAscratch_area
              INAT APR"
OTPHARGIN PERCENTAGE"
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OTPHÄRGIN PERCENTAGE"
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              TYPercent (ESC) VQ
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 315
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              View a plot for November throuview a plot for December throuview GRAPE FOR JANUARY THROUGH
              /RUscratch_area
/RVjan_margin_scratch_a3
                                                                                                     /RUscratch_area
 320
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/RVjan_sargin_scratch_a1*
/RVfeh_margin_scratch_a2*
/RVmar_margin_scratch_a3*
/RVmar_margin_scratch_a4*
/RVmay_margin_scratch_a5*
/RVjun_margin_scratch_a6*
/RVjun_margin_scratch_a7*
/RVmay_margin_scratch_a8*
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/RVmay_margin_scratch_a10*
/RVmov_margin_scratch_a10*
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/RVdcc_margin_scratch_a12*
/GRCTBAscratch_area*
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 321
             /RVjan Bargin scratch as

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                                                                                                    /RVieb_margin_scratch_a3/

/RVieb_margin_scratch_a3/

/RVieb_margin_scratch_a5/

/RVieb_margin_scratch_a6/

/RViub_margin_scratch_a6/

/RViub_margin_scratch_a8/

/RViub_margin_scratch_a8/
 322
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/RVsep margin scratch a10
/RVoct margin scratch a11
/RVocv margin scratch a12
              /RVaug margin scratch alo
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              /RVoct margin scratch al2
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               /RVdec margin scratch_a2
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 334
              INOV OCT
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              OTPHARGIN PERCENTAGE"
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              TSNovember through October
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              TIMonth
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              Typercent (BSC) VQ (BSC 2 VUPLOT)
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                                                                                                      ESC 2 VUPLOT
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[BSC_2_VUPLOT]
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/RVjan return scratch a6
/RVjan return scratch a7
/RVeb_return scratch a8
/RVapr_return scratch a9
/RVapr_return scratch a90
/RVapr_return scratch a10
/RVjun return scratch a12
/RVjul return scratch a12
/RVsun return scratch a2
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OTFRETURN ON CAPITAL"
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(BSC_2_VUPLOT)
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View a plot for August throughView a plot for September throView a plot for October through /RUscratch area /RUscratch
                         MONTHE
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                                                                                                    /GRGTBAscratch_area
IAUG_JUL
OTPASSET_TURNOVER
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ISBP AUG
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  438
                                                                                                     TSAugust through July TIMonth
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  367
                        OCT
View a plot for Movesher throuview a plot for December throuvIBW GRAPB FOR JAMUARY THROUGH
  369
  370 /RUscratch_arga
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                                                                                                                                                         /RUscratch area
/RVian return scratch a2
/RVian return scratch a3
/RVeb_return scratch a4
/RVapr_return scratch a6
/RVapr_return scratch a6
/RVian return scratch a6
/RVian return scratch a8
/RVian return scratch a8
/RVian return scratch a9
/RVian return scratch a10
/RVoot_return scratch a11
/RVoov_return scratch a11
/RVoov_return scratch a12
/RVdec_return scratch a1
/GROTB/Ascratch area
IDEC_MOV
OTPRETURN ON CAPITAL
                     / HUScratch_area

/ RV Jan_return_scratch_a3

/ RV feb_return_scratch_a4

/ RVsar_return_scratch_a5

/ RVsay_return_scratch_a7

/ RV Jun_return_scratch_a8

/ RV Jun_return_scratch_a9

/ RV Aug_return_scratch_a10

/ RV sep_return_scratch_a11

/ RV oct_return_scratch_a11
                                                                                                                                                                                                                                                                                               /RVjan_return_scratch_al
/RVfeb_return_scratch_a2
  371
  372
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/Byar return scratch a?
/Byar return scratch a4
/Byay return scratch a5
/Byjun return scratch a6
/Byjun return scratch a7
/Byaug return scratch a8
/Bysep return scratch a9
/Bycer return scratch a9
  373
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                                                                                                                                                                                                                                                                                               /RVoct_return scratch_al0*/RVnov_return scratch_al1*/RVdec_return scratch_al2*/GEGTBAscratch_area*
IJAN_DEC*
                      /RVoct_return_scratch_al2/RVocv_return_scratch_al2/RVdcc_return_scratch_al2/RVdcc_return_scratch_a2/RGCTBAScratch_area_XMOV_OCT
  380
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                       OTPRETURN ON CAPITAL
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                       View a plot for May through ApView a plot for June through MView a plot for July through J

/RUscratch_area /RUscratch_area /RUscratch_area
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                    /RUscratch_area
/RVjan_asset scratch_a9
/RVjeb_asset scratch_a10
/RVsar_asset scratch_a11
/RVapr_asset scratch_a12
/RVsay_asset scratch_a2
/RVjun_asset scratch_a2
/RVjun_asset scratch_a3
/RVaug_asset scratch_a4
/RVsep_asset scratch_a4
/RVsep_asset scratch_a6
/RVnov_asset scratch_a6
/RVnov_asset scratch_a8
/GRGTBAScratch_area
/RMAY_APR
OTFASSET_TURNOVER
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/RVJan_asset_scratch_a7
/RVfeb_asset_scratch_a8
/RVan_asset_scratch_a9
/RVapr_asset_scratch_a10
/RVsay_asset_scratch_a11
/RVJun_asset_scratch_a12
/RVjun_asset_scratch_a1
/RVaug_asset_scratch_a2
/RVsep_asset_scratch_a2
/RVsep_asset_scratch_a4
/RVoot_asset_scratch_a4
/RVoot_asset_scratch_a6
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OTPASSET_TURMOVER
TSJuly_through_June
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/RVian_asset scratch_a9
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/RVjun_asset scratch_a2
/RVaug_asset scratch_a3
/RVsep_asset scratch_a4
/RVoct_asset scratch_a4
/RVoct_asset scratch_a6
/RVdec_asset scratch_a6
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                    View a plot for November throuview a plot for December throuview GRAPB FOR JANUARY THROUGH

// RUscratch area // RUscratch area // RUscratch area // RVian asset scratch a3 // Rvian asset scratch a4 // Rvian asset scratch a5 // Rvian asset scratch a4 // Rvian asset scratch a5 // Rvian asset scratch a4 // Rvian asset scratch a4 // Rvian asset scratch a5 // Rvian asset scratch a4 // Rvian asset scratch a5 // Rvian asset scratch a6 // Rviin asset scratch a6 //
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RVauy_asset scratch_a5/
RVjun_asset scratch_a6/
RVjun_asset scratch_a7/
RVaug_asset scratch_a8/
RVeep_asset scratch_a10/
RVoct_asset scratch_a10/
RVoct_asset scratch_a11/
RVdec_asset scratch_a11/
AVdec_asset scratch_a12/
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OTPASSET_TURNOVER*
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                       /GRGTBAscratch_area INOV OCT
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OTFASSET TURNOVER
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                      OTPASSET TURNOVER
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                     TSNovember through October TIMonth
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/RVieb_gross_scratch_al2_
/RVsar_gross_scratch_al2_
/RVsar_gross_scratch_al2_
/RVsar_gross_scratch_al2_
/RVjup_gross_scratch_al2_
/RVjup_gross_scratch_al2_
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/RVmar_gross_scratcb_a8
/RVmar_gross_scratcb_a9
/RVmar_gross_scratcb_a10
/RVjub_gross_scratcb_a11
/RVjub_gross_scratcb_a12
/RVmag_gross_scratcb_a1
/RVsep_gross_scratcb_a3
/RVmov_gross_scratcb_a3
 476
                                                                                                                                                                                                                                                   /BVjun_gross_scratch_all
/BVjul_gross_scratch_all
/BVaus_gross_scratch_all
/BVoct_gross_scratch_al
/BVoct_gross_scratch_al
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/RVjul gross scratch a10
/RVaug gross scratch a11
/RVaug gross scratch a12
/RVoct gross scratch a1
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/RVdec_gross_scratch_a4
/GRGTBAscratch_area
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                                                                                                 /RVdec gross scratch a5
/GRGTBAscratch area
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/GRGTBAscratch_area
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OTPGROSS MARGIN ON SALES"
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                        PBB JAN
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View a plot for May through Apview a plot for June through Mview a plot for July through J
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View a plot for November throuview a plot for December throuview GRAPE POR JANUARY THROUGH
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/RVjun_gross scratch_a7  
/RUjun_gross scratch_a8  
/RVaug_gross scratch_a8  
/RVaug_gross scratch_a10  
/RVoct_gross scratch_a10  
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512 513 C D Á В MOV\_OCT HOV Dec Jan 514 515 DBC\_NOV 516 517 JAN\_DEC 518 519 Dec Jan Peb Jan Peb Mar PILE SAVE & REPLACE SAVE TO NEW PILE QUIT WITHOUT SAVING Save the current file in memorRait SBDSS without saving chan (GOTO) blank area (GOTO) quit\_mag (FS[?] \* (?) (GOTO) quit\_corner\*/Q | GOTO) quit\_corner\*/Q Replace the file on disk with (GOTO) blank area /PS R(GOTO) note /PRAMBOPP) [GOTO] note corner [WAIT @NOW+@TIME(0,0,5)] PRAMEOPP; {GOTO}bote\_corper\* {WAIT @NOW+@TIME(0,0,5)} {BSC\_2\_MENU} (BSC\_2\_MENU) 530 531 532 (RESTART) 18 533 534 535 {FRAMEOFF} (GOTO) screen corner\* (MENUBRANCH TENU) RESTART 536 537 538 539 BSC\_2\_MENU) 540 541 542 543 banner .... 544 545 546 547 8 8 8 548 549 550 551 552 553 8 8 8 Welcome to the 8 . SMALL BUSINESS 8 554 555 8 DECISION SUPPORT SYSTEM . 556 557 558 559 8 Version I.0 8 1 560 561 562 563 

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## APPENDIX B

Appendix B contains the range names used in the SBDSS file. The range names were printed using Lotus 1-2-3's own printing function. They are displayed exactly as they appear in Spreadsheet D. Each range name is accompanied by its associated cell references and description. Due to the limitations of Lotus 1-2-3's printing function, some of the range name descriptions are truncated. This is indicated by a black dot at the right hand of the description. The complete description is visible in Spreadsheet D.

```
A: V1..A: AA304
                                                Contains the financial statements for April.
 APRIL
 APR ACCTPAY
                         A: 7140 . . A: 7140
                                                Balance of accounts payable for April.
 APR ACCTRCVBL
                         A: Y122..A: Y122
                                                Balance of accounts receivable for April.
 APR_ADVERTISE
                        A: Y33..A: Y33
                                                Advertising expenses for April.
APR ASSET
APR BANK
APR BUILDING
                         A: Y291 . . A: Y291
                                                The performance measure Asset Turnover Ratio for April.
                        A: Y121..A: Y121
                                                Balance in bank accounts for April.
Original cost of buildings owned by end of April.
                         A: Y131..A: Y131
APR CAPSTOCK
                        A: Y147..A: Y147
                                                Original cost of capital stock owned at end of April.
                         A: Y120 . . A: Y120
 APR CASH
                                                Cash on hand for April.
APR_CONSUMABLE
                        A: Y125 . . A: Y125
                                                Original cost of consumable supplies on hand at end of April.
                        A: Y18..A: Y18
A: V337..A: V337
 APR_CUSTOMS
                                                Customs expenses for April.
APR DATA
APR DATBLNES
APR DVDS
APR BIHIBIT
                                                Copy of the data entry form for April.
                        A: 7344 . A: 7417
A: 266 . A: 266
A: 734 . A: 734
                                                The data inputted for April and located in APR_DATA.
                                                Dividends paid in April.
Exhibition expenses for April.
APR PREIGHT
                        A: Y19..A: Y19
                                                Preight expenses for April.
APR FURNITURE
                        A: Y130 . . A: Y130
                                                Original cost of office furniture owned at end of April.
APR GROSS
APR INTAX
APR INTEREST
APR INTEXP
APR INVENTORY
                                                The performance measure % Gross Margin on Sales for April.
                        A: Y293..A: Y293
                        A: AA50 . . A: AA50
                                                 Income tax expense for April.
                        A:Z11..A:Z11
A:Y42..A:Y42
                                                 Interest earned in April
                                                Interest expense in April.
End of the month inventory for April.
                        A: 224 . . A: 224
APR ISSCAPSTE
                        A: 2248 . . A: Z248
                                                 Proceeds from issuing capital stock in April.
APR_LONGDEBT
                        A: Z145..A: Z145
                                                Amount of long term debt at end of April.
                        C: B499. . C: M499
                                                 Contains labels for Apr-Mar plots.
APR MAR
APR_MARGIN
                        A: Y287..A: Y287
                                                The performance measure Margin % for April.
APB_MONTH
                                                Date used in heading of income statement for April.
                        A: X3..A: X3
APR NOTESPAY
APR OFFEGUIP
APR OFFEGUIP
APR PREEXP
APR PURCHASES
                                                Balance of notes payable for April.
Original cost of office equipment owned at end of April
Other expenses not listed for April.
                        A: Y142 . . A: Y142
                        A: Y129..A: Y129
                        A: 743..A: 743
                                                 Balance of prepaid expenses for April.
                        A: Y123..A: Y123
                        A: Y17..A: Y17
                                                Cost of purchases for inventory in April.
APR RETURN
APR SALARIBS
                        A: Y289 . . A: Y289
                                                The performance measure Return on Capital for April.
                        A: Y39..A: Y39
                                                Offices salaries paid in April.
                        A:27..A:27
APR_SALES
                                                 Revenue from sales for April
                        A: Z31 . . A: Z31
APR_SELLEXP
                                                Expenses associated with selling for April.
APR SELLEAP
APR SEMINARS
APR SHORTBORROW
APR SHORTDEBT
APR STAI
APR TAXPAY
APB TRAVEL
APR UTILITIES
                        A: Y35 . . A: Y35
A: Z247 . . A: Z247
                                                Expenses associated with seminars for April.
                                                Proceeds from short term borrowing in April.
                        A:Z250..A:Z250
A:Z8..A:Z8
                                                Payment made on short term debt for April.
                                                Sales tax paid on inventory purchases for April. Balance of income taxes payable for April.
                        A: Y141..A: Y141
                        A: 741..A: 741
                                                Travel expenses for April
                        A: 740 . . A: 740
                                                Utilities expenses in April.
AUGUST
                        A: AX1..A: BC304
                                                The financial statements for August.
AUG_ACCTPAY
                        A:BA140..A:BA140
                                                Balance of accounts payable for August.
AUG_ACCTRCVBL
AUG_ACCTRCVBL
AUG_ADVBRTISE
AUG_ASSBT
AUG_BANK
AUG_BUILDING
AUG_CAPSTOCK
AUG_CASH
AUG_CONSUMABLE
AUG_CUSTOMS
AUG_DATA
AUG_DATA
AUG_DATBLNKS
AUG_DYDS
AUG_EXHIBIT
AUG_PREIGHT
AUG_FREIGHT
AUG_GROSS
AUG_INTAX
                        A:BA122..A:BA122
                                                Balance of accounts receivable for August.
                        A:BA33..A:BA33
                                                Advertising expenses in August.
                                                The performance measure Asset Turnover Ratio for August.
                        A:BA291..A:BA291
                                                The bank balance for August.
Original cost of buildings owned at end August.
Original cost of capital stock owned by end of August.
The balance of cash on hand in August.
                        A:BA121..A:BA121
                        A:BA131..A:BA131
                        A: BA147 . . A: BA147
                        A:BA120..A:BA120
                        A:BA125..A:BA125
                                                Original cost of consumable supplies on hand at end of August.
                        A:BA18..A:BA18
                                                Customs expenses in August.
                        A: AX337..A: AX337
                                                Copy of the data entry form for August.
                        A:BA344..A:BA417
                                                The data inputted for August located in AUG_DATA.
                                                Dividends paid in August.
Exhibition expenses for August
                        A:BB66..A:BB66
                        A:BA34..A:BA34
A:BA19..A:BA19
                                                Freight expenses for August.
Original cost of office furniture owned at end of August.
                        A:BA130..A:BA130
                                                The performance measure % Gross Margin on Sales for August.
                        A:BA293..A:BA293
AUG INTAL
                        A:BC50..A:BC50
                                                Income tax expense for August.
AUG INTEREST
                        A:BB11..A:BB11
                                                Interest earned in August.
AUG INTEXP
                        A:BA42..A:BA42
                                                Interest expense for August.
```

```
AUG_INVENTORY
                                 A:BB24..A:BB24
                                                                  Cost of the end of the month inventory for August.
AUG_ISSCAPSTE
AUG_JUL
AUG_LONGDEBT
AUG_MARGIN
AUG_MONTH
AUG_NOTESPAY
                                 A:BB248..A:BB248
                                                                  Proceeds for issuing capital stock in August.
                                 C: B507..C: M507
                                                                  Contains labels for Aug-Jul plots.
                                 A:BB145..A:BB145
A:BA287..A:BA287
                                                                  Amount of long term debt at end of August.
                                                                  The performance measure Margin % for August.
Date used in heading of Income statement.
                                 A: AZ3..A: AZ3
                                 A: BA142 . . A: BA142
                                                                  Balance of notes payable for August.
AUG OPPEQUIP
AUG OPPEQUIP
AUG OPPEQUIP
AUG PREEXP
AUG PURCHASES
AUG RETURN
AUG SALARIES
AUG SALES
AUG SELLEXP
AUG SELLEXP
AUG SENIMARS
                                 A:BA129..A:BA129
                                                                  Original cost of office equipment owned at end of August.
                                 A:BA43..A:BA43
                                                                  Other expenses not listed for August.
                                 A:BA123..A:BA123
                                                                  Balance of prepaid expenses for August.
                                 A: BA17..A: BA17
                                                                  Cost of purchases for inventory in August.
                                 A:BA289..A:BA289
                                                                  The performance measure Return on Capital for August.
                                 A:BA39..A:BA39
                                                                  Office salaries paid in August.
                                 A:BB7..A:BB7
A:BB31..A:BB31
                                                                  Revenue from sales for August.
Expenses associated with selling for August.
AUG SELLEXP
AUG SEMINARS
AUG SHORTBORROW
AUG SHORTDEBT
AUG STAX
AUG TAXPAY
AUG TRAVEL
AUG UTILITIES
BANK BALANCE
                                 A:BA35..A:BA35
                                                                  Expenses associated with seminars for August.
                                 A:BB247..A:BB247
                                                                  Proceeds from short term borrowing in August.
                                                                  Payment made on short term debt for August.
                                 A:BB250..A:BB250
                                 A:BB8..A:BB8
                                                                  Sales tax paid on inventory purchases in August.
                                                                  Balance of income taxes payable for August. Expenses associated with travel in August.
                                 A:BA141..A:BA141
                                 A:BA41..A:BA41
                                 A:BA40..A:BA40
                                                                  Expenses for utilities in August.
                                 B: I52..B: I52
                                                                  Contains the formula used to determine the total bank balance on the
BANNĒR
                                 C: A543..C: D562
                                                                 Opening screen
Lower left corner of opening screen
BANNER CORNER
                                 C: A562..C: A562
BLANK AREA
DATA ENTRY
DATA INPUT
DATBLNES
                                 C:P29..C:P29
                                                                  Blank area on worksheet. Used when quitting program.
                                 B:A1..B:E94
                                                                  This is the data entry form in worksheet B.
                                 C:B28..C:B28
                                                                  MENU FOR DATA INPUT
                                                                 Column containing inputted data on data entry form.
This is the first data element in the data entry form (Date).
Tenth data element in the data entry form (Advertising expenses).
Eleventh data element in data entry form (Exhibition expenses).
Twelveth data element in data entry form (Seminar expenses).
                                 B:D8..B:D87
DATBLNES
                                 B:D8..B:D8
DATBLNES 10
DATBLNES 11
DATBLNES 12
                                 B:D26..B:D26
                                 B:D28..B:D28
                                 B:D30..B:D30
                                                                  Thirteenth data element in data entry form (Office salaries). Fourteenth data element in data entry form (Utility expenses).
DATBLNES_13
                                 B:D32..B:D32
DATBLNES_14
                                 B:D34..B:D34
DATBLNES_15
                                                                  Fifteenth data element in data entry form (Travel expenses). Sixteenth data element in data entry form (Interest expenses).
                                 B:D36..B:D36
DATBLNES 16
DATBLNES 16
DATBLNES 18
DATBLNES 18
DATBLNES 19
DATBLNES 20
DATBLNES 20
DATBLNES 21
                                 B:D38..B:D38
                                                                 Seventh data element in data entry form (Income tax expense). Bighteenth data element in data entry form (Other expenses). Wineteenth data element in data entry form (Dividends paid). Second data element in data entry form (Sales).
                                 B: D40..B: D40
                                 B: D42..B: D42
                                 B: D44..B: D44
                                 B:D10..B:D10
                                                                  Twentieth data element in data entry form (Cash on hand).
Twenty-first data element in data entry form (Bank account balance:
                                 B: D46..B: D46
                                 B:D52..B:D52
DATBLNES 22
DATBLNES 23
                                 B: D55..B: D55
                                                                  Twenty-second data element in data entry form (Balance of accounts Twenty-third data element in data entry form (Prepaid expenses).
                                 B:D57..B:D57
DATBLINES 23
DATBLINES 24
DATBLINES 25
DATBLINES 26
DATBLINES 27
DATBLINES 29
DATBLINES 3
DATBLINES 3
DATBLINES 31
DATBLINES 31
                                                                 Twenty-fourth data element in data entry form (Frepaid expenses).
Twenty-fifth data element in data entry form (Cost of office equipped freenty-sixth data element in data entry form (Cost of furniture own-Twenty-seventh data element in data entry form (Cost of building).
Twenty-eighth data element in data entry form (Balance of accounts Twenty-nineth data element in data entry form (Income taxes payable).
Thirtieth data element in data entry form (Sales tax).
                                 B:D59..B:D59
                                 B: D61..B: D61
                                 B:D63..B:D63
                                 B:D65..B:D65
B:D67..B:D67
                                 B:D69..B:D69
                                 B:D12..B:D12
                                                                  Thirtieth data element in data entry form (Notes payable).
                                 B:D76..B:D76
                                 B:D79..B:D79
                                                                  Thirty-first data element in data entry form (Long term debt).
DATBLNES_32
                                 B:D81..B:D81
                                                                  Thirty-second data element in data entry form (Capital stock).
DATBLINES 32
DATBLINES 33
DATBLINES 34
DATBLINES 35
DATBLINES 5
DATBLINES 5
DATBLINES 5
DATBLINES 7
DATBLINES 7
DATBLINES 8
DATBLINES 8
                                 B:D83..B:D83
                                                                  Thirty-third data element in data entry form (Proceeds from short to
                                 B:D85..B:D85
                                                                  Thirty-fourth data element in data entry form (Proceeds from issuite
                                                                 Thirty-fourth data element in data entry form (Proceeds from 1884).

Thirty-fifth data element in data entry form (Payments on short tele-
Fourth data element in data entry form (Furchases for inventory).

Sixth data element in data element form (Customs on purchases).

Seventh data element in data entry form (Freight on purchases).

Bighth data element in data entry form (Inventory, end of month).

Mineth data element in data entry form (Selling expenses).
                                 B:D87..B:D87
                                 B:D14..B:D14
                                 B: D16..B: D16
                                 B:D18..B:D18
                                 B: D20..B: D20
                                 B:D22..B:D22
DATBLNES 9
                                 B: D24..B: D24
```

```
A:BZ1..A:CE304
                                               Contains the financial reports for December.
DECEMBER
DEC_ACCTPAY
                        A:CC140..A:CC140
                                               Balance of accounts payable for December.
DEC ACCTROVEL
                        A:CC122..A:CC122
                                               Balance of accounts receivable for December.
DEC_ADVERTISE
DEC_ASSET
DEC_BANK
DEC_BUILDING
DEC_CAPSTOCK
DEC_CASH
DEC_CASH
                        A:CC33..A:CC33
                                               Advertising expenses for December.
                                               The performance measure Asset Turnover Ratio for December. Balance in bank accounts for December. Original cost of buildings owned by end of December.
                        A:CC291..A:CC291
                        A: CC121..A: CC121
                        A:CC131..A:CC131
                        A: CC147..A: CC147
                                               Original cost of capital stock owned by end of December.
                                               Balance of cash on hand for December.
                        A:CC120..A:CC120
DEC_CONSUMABLE
DEC_CUSTONS
DEC_DATA
DEC_DATBLNES
DEC_DYDS
DEC_EXHIBIT
                        A:CC125..A:CC125
                                               Original cost of consumable supplies on hand at end of December.
                                               Customs expenses for December.
Copy of the data entry form for December.
                        A:CC18..A:CC18
                        A:BZ337..A:BZ337
                        A: CC344..A: CC417
                                               The data inputted for December and located in the data entry form.
                        A:CD66..A:CD66
A:CC34..A:CC34
                                               Dividends paid in December.
Exhibition expenses for December.
DEC_PREIGHT
                        A:CC19..A:CC19
                                               Preight expenses for December.
DEC_FURNITURE
DEC_GROSS
DEC_INTAX
DEC_INTEREST
DEC_INTEXP
DEC_INVENTORY
                        A:CC130..A:CC130
                                               Original cost of office furniture owned at end of December.
                        A:CC293..A:CC293
                                               The performance measure % Gross Margin on Sales for December.
                        A:CB50..A:CB50
                                                Income tax expenses for December.
                        A:CD11..A:CD11
                                                Interest earned in December.
                        A:CC42..A:CC42
                                                Interest expenses in December.
                        A:CD24..A:CD24
                                               End of the month inventory for December.
DEC ISSCAPSTE
                        A:CD248..A:CD248
                                               Proceeds from issuing capital in December.
DEC_LONGDEBT
                        A:CD145..A:CD145
                                               Amount of long term debt at end of December.
DBC_MARGIN
DEC_MONTH
DEC_MOTESPAY
DEC_NOV
DBC_OFFEQUIP
DBC_OTHER
DEC_PREEXP
DBC_PURCHASES
                                               The performance measure Margin % for December.
Date used in heading of income statement for December.
                        A:CC287..A:CC287
                        A:CB3..A:CB3
                                               Balance of notes payable for December.
Contains labels for Dec-Nov plots.
                        A: CC142..A: CC142
                        C:B515..C:M515
                                               Original cost of office equipment owned at end of December. Other expenses not listed for December.
                        A:CC129..A:CC129
                        A: CC43..A: CC43
                        A:CC123..A:CC123
                                               Balance of prepaid expenses for December
                        A:CC17..A:CC17
                                               Cost of purchases for inventory in December.
                        A: CC289 . . A: CC289
DEC_RETURN
                                               The performance measure Return on Capital for December.
DBC_SALARIBS
DBC_SALES
DBC_SELLEXP
DEC_SELLEXP
DEC_SEMINARS
DEC_SHORTBORROW
DEC_SHORTDEBT
DEC_STAX
DEC_TAXPAY
DEC_TRAVEL
DEC_TRAVEL
                        A:CC39..A:CC39
                                               Offices salaries paid in December.
                        A: CD7..A: CD7
                                               Revenue from sales for December.
                        A:CD31..A:CD31
                                               Expenses associated with selling for December.
                       A:CC35..A:CC35
A:CD247..A:CD247
                                               Expenses associated with seminars for December.
                                               Proceeds from short term borrowing in December.
                        A:CD250..A:CD250
A:CD8..A:CD8
                                               Payment made on short term debt for December.
                                               Sales tax paid on inventor; purchases in December.
Balance of income taxes payable for December.
                        A:CC141..A:CC141
                        A:CC41..A:CC41
                                                Travel expenses for December.
DEC UTILITIES
                        A:CC40..4.CC40
                                               Utilities expenses in December.
ENTRY FORM
ESC2_DATA INPUT
ESC_2_MENU
ESC_2_PLOTS
ESC_2_REPORTS
ESC_2_VUPLOT
                        B:A1..B:E97
                                               Names the entire Data Entry Form.
                        C:B36..C:B36
                                               Macro which allows user to escape back to Data input menu from a sie
                                               Macro which allows user to escape back to Main menu from a submenu.
                        C:B22..C:B22
                        C:B273..C:B273
                                               Macro which lets user escape back to Plots menu from a submenu.
                        C:B243..C:B243
C:B285..C:B285
                                               Macro which allows user to escape back to Reports menu from a submet.

Allows user to escape back to Vuplot menu from a submenu.

Contains the financial for Pebruary.
PEBRUARY
                        A:B1..A:M304
FEB_ACCTPAY
                        A: E140 . . A: E140
                                                Balance of accounts payable for February.
FEB_ACCTRCVBL
                        A: K122..A: K122
                                               Balance of accounts receivable for February.
PEB_ADVERTISE
                        A: K33..A: K33
                                               Advertising expenses for Pebruary.
                        A: K291 . . A: K291
FEB_ASSET
                                               The performance measure Asset Turnover Ratio for February.
PEB_BANE
                        A: K121 . . A: K121
                                               Balance in bank accounts for February.
                        A: K131 . . A: K131
PEB_BUILDING
                                               Original cost of buildings owned at end of February.
FEB CAPSTOCE
FEB CASH
FEB CONSUMABLE
FEB CUSTOMS
                                               Original cost of capstock owned at end of February. Balance of cash on hand for February.
                        A: K147 . . A: K147
                        A: K120 . . A: K120
                        A: K125..A: K125
A: K18..A: K18
                                               Original cost of consumable supplies on hand in Pebruary.
                                               Customs expenses for February.
PEB DATA
                        A: H337..A: H337
                                               Copy of the data entry form for February.
                                               The data inputted for February and located in FBB_DATA.
PBB DATBLNES
                        A: K344 . . A: K417
FEB DVDS
                        A:L66..A:L66
                                               Dividends paid in February
FEB_EXHIBIT
```

Exhibition expenses for February.

A: K34..A: K34

```
Preight expenses for February.
FEB_PREIGHT
                       A: K19..A: K19
PEB_FURNITURE
                       A: K130 . . A: K130
                                             The original cost of office furniture owned at end of February.
FEB_GROSS
FEB_INTAX
                       A: K293 . . A: K293
                                             The performance measure % Gross Margin on Sales for February.
                                             Income tax expense for Pebruary.
                       A:M50..A:M50
PEB_INTEREST
PEB_INTERP
PEB_INVENTORY
PEB_ISSCAPSTE
PEB_JAN
PEB_IONORPET
                       A: L11..A: L11
                                             Interest earned in February.
                      A:K42..A:K42
A:L24..A:L24
                                             Interest expense in February.
End of the month inventory for February.
                       A:L248..A:L248
                                             Proceeds from issuing capital stock in February. Contains labels for Feb-Jan plots.
                       C:B495..C:M495
PBB_LONGDEBT
PBB_MARGIN
                       A:L145..A:L145
                                             Amount of long term debt at end of Pebruary.
                      A: K287 . . A: K287
                                             The performance measure Margin % for Pebruary.
PEB MONTH
PEB NOTESPAY
PEB OFFECUIP
PEB OTHER
PEB PREEXP
                      A:J3..A:J3
                                             Date used in heading of income statement for February.
                                             Balance of notes payable for February.
Original cost of office equipment owned at end of February.
Other expenses not listed for February.
                      A: K142..A: K142
                      A: K129. . A: K129
A: K43. . A: K43
                      A: K123 . . A: K123
                                             Balance of prepaid expenses for Pebruary.
                      A: K17..A: K17
PBB_PURCHASES
                                             Cost of purchases for inventory in Pebruary.
                      A: K289..A: K289
PBB_RBTURN
                                             The performance measure Return on Capital for Pebruary.
PEB_SALARIES
                      A: K39 . . A: K39
                                             Office salaries paid in Pebruary.
PEB_SALES
PEB_SELLEXP
FEB_SEMINARS
FEB_SHORTBORROW
                      A:L7..A:L7
A:L31..A:L31
                                             Revenue from sales for February.
                                             Expenses associated with selling in February.
                      A: K35..A: K35
A: L247..A: L247
                                             Expenses associated with seminars in Pebruary.
                                             Proceeds from short term borrowing in February.
PEB_SHORTDEBT
FEB_STAX
                      A:L250..A:L250
                                             Payment on short term debt in February.
                      A:L8..A:L8
                                             Sales tax paid on inventory purchased in February.
FEB_TAXPAY
                      A: K141..A: K141
                                             Balance of taxes payable for February.
FEB_TRAVEL
                      A: K41..A: K41
                                             Travel expenses for February.
PEB_UTILITIES FILE
                                             Utilities expenses for February.
MENU FOR SAVING FILES
                      A: K40 . . A: K40
                      C: B521..C: B521
                      A:A1..A:P304
A:D140..A:D140
JANUARY
                                             Contains the financial reports for January.
JAN_ACCTPAY
JAN_ACCTRCVBL
                                             Balance of accounts payable for January.
                      A:D122..A:D122
                                             Balance of accounts receivable for January.
JAN ADVERTISE
                      A:D33..A:D33
                                             Advertising expenses for January.
JAN_ASSET
JAN_BANK
                      A:D291..A:D291
                                             The performance measure Asset Turnover Ratio for January.
                      A: D121..A: D121
                                             Balance in bank accounts for January.
JAN BUILDING
                      A:D131..A:D131
                                             Original cost of buildings owned at end of January.
JAN CAPSTOCE
                      A:D147..A:D147
                                             Original cost of capital stock owned at end of January.
JAN_CASH
JAN_CONSUNABLE
                      A: D120..A: D120
                                             Balance of cash on hand for January.
                      A: D125 . . A: D125
                                             Original cost of consumable supplies on hand in January.
JAN CUSTONS
JAN DATA
JAN DATBLNES
JAN DEC
                      A:D18..A:D18
                                             Customs expenses for January.
                      A: A337..A: A337
                                             Copy of the data entry form for January.
                      A:D344..A:D417
C:B517..C:M517
                                             The data inputted for January and located in JAN_DATA.
                                             Contains labels for Jan-Dec plots.
JAN DVDS
                      A: E66 . . A: E66
                                             Dividends paid in January.
JAN EXHIBIT
                                             Exhibition expenses for January.
                      A:D34..A:D34
JAN PREIGHT
JAN FURNITURE
                      A: D19..A: D19
                                             Preight expenses for January.
                      A: D130..A: D130
                                             The original cost of office furniture owned at end of January.
JAN-GROSS
JAN-INTAX
JAN-INTEREST
JAN-INTEXP
JAN-INVENTORY
JAN-ISSCAPSTE
                      A:D293..A:D293
                                             The performance measure % Gross Margin on Sales for January.
                      A: P50..A: P50
                                             Income tax expense for January.
                      A: B11..A: B11
                                             Interest earned in January.
                      A: D42..A: D42
                                             Interest expense in January.
                      A: E24..A: E24
A: E248..A: E248
                                             End of the month inventory for January.
Proceeds from issuing capital stock in January.
Amount of long term debt at end of January.
JAN LONGDEBT
                      A:E145..A:E145
A:D287..A:D287
                                             The performance measure Margin % for January.
JAN_WONTH
                                             Date used in heading of income statement for January.
                      A:C3..A:C3
                      A: D142..A: D142
JAN_NOTESPAY
                                             Balance of notes payable for January.
JAN OPPEQUIP
JAN OTHER
JAN PREEXP
JAN PURCHASES
                      A:D129..A:D129
                                             Original cost of office equipment owned at end of January.
                      A:D43..A:D43
                                             Other expenses not listed for January.
                      A:D123..A:D123
A:D17..A:D17
                                             Balance of prepaid expenses for January.
                                             Cost of purchases for inventory in January.
JAN RETURN
JAN SALARIES
                      A:D289..A:D289
                                             The performance measure Return on Capital for January.
                      A:D39..A:D39
                                             Office salaries paid in January.
JAN_SALES
                      A: B7..A: B7
                                             Revenue from sales for January.
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JAN SBLLEIP
JAN SEMINARS
JAN SHORTBORROW
JAN SHORTDEBT
JAN STAX
JAN TAIPAY
JAN TRAVEL
JAN UTILITIES
                             A: B31..A: B31
                                                          Expenses associated with selling in January.
                             A: D35 . . A: D35
                                                          Expenses associated with seminars in January.
                             A: B247 . . A: B247
                                                          Proceeds from short term borrowing in January.
                             A: B250..A: B250
                                                          Payment made on short term debt in January.
                                                          Sales tax paid on inventory purchased in January. Balance of taxes payable for January.
                             A: E8 . . A: E8
                             A: D141..A: D141
                             A: D41..A: D41
                                                          Travel expenses for January.
                                                          Utilities expenses for January.
                             A: D40..A: D40
                             A:AQ1..A:AV304
A:AT140..A:AT140
JULY
                                                          Contains the financial reports for July.
JUL_ACCTPAY
                                                          Balance of accounts payable for July.
JUL ACCTRCVBL
JUL ADVERTISE
JUL ASSET
JUL BANK
JUL BUILDING
                             A: AT122. . A: AT122
                                                          Balance of accounts receivable for July.
                                                         Advertising expenses for July.
The performance measure Asset Turnover Ratio for July.
Balance in bank accounts for July.
Original cost of buildings owned at end of July.
                             A:AT33..A:AT33
                            A:AT291..A:AT291
A:AT121..A:AT121
A:AT131..A:AT131
                                                         Original cost of capital stock owned at end of July.
                             A:AT147..A:AT147
JUL_CAPSTOCE
JUL_CASH
JUL_CONSUMABLE
JUL_CUSTOMS
JUL_DATA
JUL_DATBLNES
JUL_DVBS
                             A: AT120 . . A: AT120
                                                          Balance of cash on hand for July.
                                                         Original cost of consumable supplies on hand in July.
Customs expenses for July.
Copy of the data entry form for July.
                            A:AT125..A:AT125
A:AT18..A:AT18
A:AQ337..A:AQ337
                                                          The data inputted for July and located in JUL_DATA
                             A: AT344 . . A: AT417
                             A:AU66..A:AU66
                                                          Dividends paid in July.
JUL_BIBIBIT
                             A: AT34..A: AT34
                                                          Exhibition expenses for July.
JUL_PREIGHT
                             A:AT19..A:AT19
                                                          Preight expenses for July.
JUL PURNITURE
JUL GROSS
JUL INTAX
JUL INTEREST
JUL INTERP
JUL INVENTORY
                             A:AT130..A:AT130
                                                         Original cost of office furniture owned at end of July.
                             A:AT293..A:AT293
                                                         The performance measure % Gross Margin on Sales for July.
                                                          Income tax expense for July. Interest earned in July.
                             A:AV50..A:AV50
                             A:AU11..A:AU11
A:AT42..A:AT42
                                                         Interest expense in July.

End of the month inventory for July.

Proceeds from issuing capital stock in July.

Contains labels for Jul-Jun plots.
                             A: AU24..A: AU24
JUL_ISSCAPSTE
                             A: AU248..A: AU248
JUL_JUN
                             C: B505..C: M505
JUL_LONGDEBT
                             A: AU145 . . A: AU145
                                                          Amount of long term debt at end of July.
JUL_MARGIN
JUL_MARGIN
JUL_MONTE
JUL_NOTESPAY
JUL_OFFEQUIP
JUL_OFFER
JUL_PREEXP
JUL_PURCHASES
                             A:AT287..A:AT287
                                                         The performance measure Margin % for July.
                                                          Date used in heading of income statement for July.
                             A: AS3..A: AS3
                                                         Balance of notes payable for July.
Original cost of office equipment owned at end of July.
Other expenses not listed for July.
                             A: AT142 . . A: AT142
                             A: AT129 . . A: AT129
                             A:AT43..A:AT43
                             A:AT123..A:AT123
A:AT17..A:AT17
                                                         Balance of prepaid expenses for July.
Cost of purchases for inventory in July.
JUL_RETURN
                             A: AT289 . . A: AT289
                                                         The performance measure Return on Capital for July.
JUL_SALARIES
                             A:AT39..A:AT39
                                                         Office salaries paid in July.
JUL_SALES
JUL_SELLEXP
                             A: AU7 . . A: AU7
                                                          Revenue from sales for July.
                                                          Expenses associated with selling in July.
                             A: AU31..A: AU31
JUL_SELLBAP
JUL_SEMINARS
JUL_SHORTBORROW
JUL_SHORTDEBT
JUL_STAX
JUL_TAIPAY
JUL_TRAVEL
JUL_UTILITIES
                                                         Expenses associated with seminars in July. Proceeds from short term borrowing in July.
                             A:AT35..A:AT35
A:AU247..A:AU247
                                                         Payment made on short term debt in July. Sales tax on inventory purchased in July. Balance of taxes payable for July. Travel expenses for July.
                             A: AU250..A: AU250
A: AU8..A: AU8
                             A:AT141..A:AT141
                             A: AT41 . . A: AT41
                                                          Utilities expenses for July.
Contains the financial reports for June.
                             A: AT40 . . A: AT40
JUNE
                             A:AJ1..A:A0304
JUN ACCTPAY
JUN ACCTRCVBL
JUN ADVERTISE
JUN ASSET
JUN BANK
JUN BUILDING
JUN CAPSTOCE
                             A:AH140..A:AH140
                                                          Balance of accounts payable for June.
                             A:AM122..A:AM122
                                                          Balance of accounts receivable for June.
                                                         Advertising expenses for June. The performance measure Asset Turnover Ratio for June.
                             V: VR33 · · V: VR33
                            A:AM291..A:AM291
A:AM121..A:AM121
A:AM131..A:AM131
                                                         Balance in bank accounts for June.
Original cost of buildings owned at end of June.
Original cost of capital stock owned by end of June.
balance of cash on hand for June.
                             A: AM147 . . A: AM147
                             A:AM120..A:AM120
JUN_CASE
JUN CONSUNABLE
                             A: AM125..A: AM125
                                                         Original cost of consumable supplies on hand in June.
JUN CUSTOMS
JUN DATA
                             A:AM18..A:AW18
                                                          Customs expenses for June.
                             A:AJ337..A:AJ337 Copy of the data entry form for June.
A:AM344..A:AM417 The data inputted for June and located in JUN_DATA.
JUN DATBLNES
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JUN_DVDS
                      A:AN66..A:AN66
                                            Dividends paid in June.
JUN BXHIBIT
JUN PREIGHT
                      A:AH34..A:AH34
                                            Exhibition expenses for June.
                      A:AM19..A:AM19
                                            Freight expenses for June.
JUN PURNITURE
JUN GROSS
JUN INTAX
JUN INTEREST
                      A:AM130..A:AM130
                                            Original cost of office furniture owned at end of June.
                      A:AM293..A:AM293
                                            The performance measure % Gross Margin on Sales for June.
                      A:A050..A:A050
                                            Income tax expense for June. Interest earned in June.
                      A:AN11..A:AN11
JUNINTEXP
                      A:AM42..A:AM42
                                            Interest expense in June.
JUN INVENTORY
                      A: AN24 . . A: AN24
                                            Bnd of the month inventory for June.
JUN-ISSCAPSTE
JUN-LONGDEBT
                      A:AN248..A:AN248
                                           Proceeds from issuing capital stock in June.
                      A:AN145..A:AN145
                                            Amount of long term debt at end of June.
JUN MARGIN
JUN MAY
JUN MONTH
JUN NOTBSPAY
                      A: AM287..A: AM287
                                           The performance measure Margin % for June.
                      C:B503..C:M503
                                            Contains labels for Jun-May plots.
                      A:AL3..A:AL3
A:AM142..A:AM142
                                           Date used in heading of income statement for June.
Balance of notes payable for June.
Original cost of office equipment owned at end of June.
JUN OFFEQUIP
                      A:AM129..A:AM129
                      A:AM43..A:AM43
JUN_OTHER
                                            Other expenses not listed for June.
JUN-PREEXP
JUN-PURCHASES
JUN-RETURN
JUN-SALARIES
JUN-SALES
JUN-SELLEXP
                      A:AM123..A:AM123
                                           Balance of prepaid expenses for June.
                      A:AM17..A:AM17
                                            Cost of purchases for inventory in June.
                      A:AM289..A:AM289
                                           The performance measure Return on Capital for June.
                      A:AM39..A:AM39
                                            Office salaries paid in June.
                      A:AN7..A:AN7
A:AN31..A:AN31
                                            Revenue from sales for June.
                                            Expenses associated with selling in June.
JUN SEMINARS
                      A:AM35 . . A:AM35
                                            Expenses associated with seminars in June.
                      A:AN247..A:AN247
JUN SHORTBORROW
                                            Proceeds from short term borrowing in June.
JUN SHORT DEBT
JUN STAX
JUN TAXPAY
JUN TRAVEL
JUN UTILITIES
MAIN
                      A:AN250..A:AN250
                                           Payment made on short term debt in June.
                      A:AN8..A:AN8
                                            Sales tax on inventory purchaed in June.
                      A:AB141..A:AB141
                                           Balance of taxes payable for June.
                                            Travel expenses for June.
                      A:AM41..A:AM41
                      A: AH40 . . A: AH40
                                            Utilities expenses for June.
                      C:B8..C:B8
                                            Macro which starts the application.
                                            Contains the financial reports for March.
MARCH
                      A:01..A:T304
MAR ACCTPAY
                      A:R140..A:R140
                                            Balance of accounts payable for March.
MAR_ACCTROVBL
                      A:R122..A:R122
                                            Balance of accounts receivable for March.
MAR ADVERTISE
                      A:R33..A:R33
                                            Advertising expenses for March.
                      A:R291..A:R291
MAR_ASSET
                                            The performance ratio Asset Turnover Ratio for March.
MARBANE
                      A:R121..A:R121
                                            Balance in bank accounts for March.
MAR_BUILDING
MAR_CAPSTOCE
                      A:R131..A:R131
                                           Original cost of buildings owned at end of March.
                                            Original cost of capital stock owned at end of March.
                      A:R147..A:R147
MAR CASH
MAR CONSUMABLE
MAR CUSTOMS
MAR DATA
                      A:R120..A:R120
A:R125..A:R125
                                            Balance of cash on hand for March.
                                            Original cost of consumable supplies on hand in March.
                                           Customs expenses for March.
Copy of the data entry form for March.
The data inputted for March and located in MAR_DATA.
                      A:R18..A:R18
A:0337..A:0337
MAR_DATBLNES
                      A:R344..A:R417
MARTDVDS
                      A:S66..A:S66
                                            Dividends paid in March.
                      A:R34..A:R34
C:B497..C:M497
MAR_EXHIBIT
MAR_FEB
                                            Exhibition expenses for March.
                                            Contains labels for Mar-Feb plots.
MAR PREIGHT
MAR PURNITURE
MAR GROSS
MAR INTAX
MAR INTERBST
MAR INTEXP
                      A:R19..A:R19
                                            Preight expenses for March.
                      A:R130..A:R130
                                            Original cost of office furniture owned at end of March.
                      A:R293..A:R293
                                            The performance measure % Gross Margin on Sales for March.
                      A:T50..A:T50
                                            Income tax expense for March.
                      A:S11..A:S11
                                            Interest earned in March.
                      A:R42..A:R42
                                            Interest expense in March.
MAR INVENTORY
                                            Bnd of the month inventory for March.
                      A: S24..A: S24
                      A: S248..A: S248
MAR ISSCAPSTE
                                            Proceeds from issuing capital stock in March.
WAR_LONGDEBT
                      A: $145 . . A: $145
                                            Amount of long term debt at end of March.
MAR_MARGIN
                      A:R287..A:R287
                                            The performance measure Margin % for March.
MAR_MONTH
MAR_NOTESPAY
                      A:Q3..A:Q3
A:R142..A:R142
                                            Date used in heading of income statement for March.
                                           Balance of notes payable for March.
Original cost of office equipment owned at end of March.
MAR OFFEQUIP
MAR OTBER
MAR PREEXP
MAR PURCHASES
                      A:R129..A:R129
                      A: R43..A: R43
                                            Other expenses not listed for March.
                                            Balance of prepaid expenses for March.
                      A:R123..A:R123
                      A:R17..A:R17
                                            Cost of purchases for inventory in March.
                      A:R289..A:R289
MAR RETURN
                                            The performance measure Return on Capital for March.
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MAR_SALARIBS
                        A:R39..A:R39
                                                Office salaries paid in March.
MAR_SALBS
                        A: S7..A: S7
                                                 Revenue from sales for March.
MAR SELLEXP
                        A:S31..A:S31
                                                 Expenses associated with selling in March.
                        A: R35 . . A: R35
MAR<sup>-</sup>SBMINARS
                                                 Expenses associated with seminars in March.
MAR_SHORTBORROW
                        A: S247 . . A: S247
                                                Proceeds from short term borrowing in March.
MAR SHORTDEBT
MAR STAX
MAR TAXPAY
MAR TRAVEL
                        A:S250..A:S250
                                                Payment made on short term debt in March.
                        A:S8..A:S8
A:R141..A:R141
                                                Sales tax paid on inventory purchased in March.
Balance of taxes payable for March.
                                                 Travel expenses for March.
                        A: R41..A: R41
                        A:R40..A:R40
MAR_UTILITIES
                                                Utilities expenses for March.
                                                 Contains the financial reports for May.
                        A:AC1..A:AH331
MAY
MAY_ACCTPAY
                        A:AF140..A:AF140
                                                 Balance of accounts payable for May.
MAY ACCTRCVBL
MAY ADVERTISE
MAY APR
                        A: AF122..A: AF122
                                                Balance of accounts receivable for May.
                        A:AF33..A:AF33
C:B501..C:M501
                                                Advertising expenses for May.
Contains labels for May-Apr plots.
MAY_ASSET
                        A: AF291..A: AF291
                                                The performance measure Asset Turnover Ratio for May.
MAY_BANK
                        A: AF121..A: AF121
                                                Balance in banks for May.
MAY_BUILDING
                        A:AF131..A:AF131
                                                Original cost of buildings owned at end of May.
MAY CAPSTOCK
MAY CASH
MAY CONSUMABLE
MAY CUSTOMS
MAY DATA
MAY DATA
MAY DATBLINES
                        A: AP147..A: AP147
                                                Original cost of capital stock owned by end of May.
                        A:AF120..A:AF120
                                                Balance of cash on hand for May.
                        A:AF125..A:AF125
A:AF18..A:AF18
                                                Original cost of consumable supplies on hand in May.
                                                Customs expenses for May.
                                                Copy of the data entry form for May.
The data inputted for May and located in MAY_DATA.
                        A: AC337..A: AC337
                        A: AF344..A: AF417
MAY DVDS
                                                 Dividends paid in May.
                        A: AG66..A: AG66
MAY EXHIBIT
                        A:AF34..A:AF34
                                                 Exhibition expenses for May.
MAY PREIGHT
MAY PURNITURE
                        A: AF19..A: AF19
                                                 Preight expenses for May.
                        A:AF130..A:AF130
                                                Original cost of office furniture owned at end of May.
MAY GROSS
MAY INTAX
MAY INTEREST
MAY INTEXP
                        A:AF293..A:AF293
                                                The performance measure % Gross Margin on Sales for May.
                        A:AH50..A:AH50
                                                Income tax expense for May.
                        A: AG11..A: AG11
                                                 Interest earned in May.
                        A: AF42 . . A: AF42
                                                 Interest expense in May.
MAY INVENTORY
                        A: AG24..A: AG24
A: AG248..A: AG248
                                                 End of the month inventory for May.
MAY ISSCAPSTE
                                                Proceeds from issuing capital stock in May.
MAY LONGDEBT
                        A: AG145 . . A: AG145
                                                Amount of long term debt at end of May.
                        A:AF287..A:AF287
MAY MARGIN
                                                The performance measure Margin % for May.
MAY MONTH
                        A:AE3..A:AE3
                                                 Date used in heading of income statement for May.
MAY NOTESPAY
MAY OFFEQUIP
MAY OTHER
MAY PREEXP
MAY PURCHASES
                        A: AF142. . A: AF142
                                                Balance of notes payable for May. Original cost of office equipment owned at end of May.
                        A:AF129..A:AF129
                        A:AF43..A:AF43
                                                Other expenses not listed for May.
                        A:AF123..A:AF123
A:AF17..A:AF17
                                                Balance of prepaid expenses for May.
Cost of purchases for inventory in May.
MAY RETURN
MAY SALARIES
                        A: AF289..A: AF289
                                                The performance measure Return on Capital for May.
                        A:AF39..A:AF39
                                                Office salaries paid in May.
MAY_SALES
                        A: AG7..A: AG7
                                                 Revenue from sales for May.
MAY_SELLEXP
                        A: AG31 . . A: AG31
                                                 Expenses associated with selling in May.
MAY SBMINARS
MAY SBORTBORROW
MAY SHORTDEBT
MAY STAX
MAY TAXPAY
MAY TRAVEL
                        A: AF35..A: AF35
                                                 Expenses associated with seminars in May.
                        A: AG247..A: AG247
                                                Proceeds from short term borrowing in May.
                        A:AG250..A:AG250
                                                Payment made on short term debt in May.
                                                Sales tax on inventory purchased in May.
Balance of taxes payable for May.
Travel expenses for May.
                        A: AG8 . . A: AG8
                        A: AF141..A: AF141
                        A: AF41..A: AF41
MAY UTILITIES
                                                Utilities expenses for May. PRIMARY MENU
                        A: AF40..A: AF40
MENU
                        C:B17..C:B17
MONTH 1
                        C: B294..C: B294
                                                 Menu for selecting plots of the margin percentage ending in Jan – •
MONTH2
                        C:B318..C:B318
                                                Menu for selecting plot of margin percentage ending in Jul- Dec.
                        C:B343..C:B343
C:B368..C:B368
MONTH3
                                                 Menu for selecting plot of return on capital ending in Jan-Jun.
                                                Menu for selecting a plot of return on capital ending in Jul-Dec.
Menu for selecting a plot of asset turnover ratio ending in Jul-Dec.
Menu for selecting a plot of asset turnover ratio ending in Jul-Dec.
Menu for selecting a plot of % gross margin on sales for Jul-Dec.
Menu for selecting a plot of % gross margin on sale for Jul-Dec.
Contains selecting a plot of % gross margin on sale for Jul-Dec.
MONTH4
                        C:B393..C:B393
C:B419..C:B419
MONTH5
MONTH6
MONTH?
                        C:B444..C:B444
MONTH8
                        C:B470..C:B470
NOTE
                        C: A590..C: D609
                                                Contains screen telling user that data has been successfully saved.
NOTES PAYABLE
                       B:176..B:176
                                                Contains the formula for determining total notes payable in the da-
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NOTE CORNER
                           C:A609..C:A609
                                                    Lower left hand corner of NOTE.
 NOVERBER
                           A:BS1..A:BX304
                                                    Contains the financial reports for November.
 NOV_ACCTPAY
                          A:BV140..A:BV140
                                                    Balance of accounts payable for November.
NOV-ACCTRCVBL
NOV-ADVERTISE
NOV-ASSET
NOV-BANK
NOV-BUILDING
NOV-CAPSTOCK
                          A:BV122..A:BV122 Balance of accounts receivable for November.
                          A:BV33..A:BV33
                                                    Advertising expenses for November.
                                                    The performance measure Asset Turnover Ratio for November. Balance in bank accounts for November.
                          A: BV291 . . A: BV291
                          A:BV121..A:BV121
                          A:BV131..A:BV131
                                                    Original of cost of buildings owned at end of November.
                          A: BV147..A: BV147
                                                    Original cost of capital stock owned by end of November.
NOV_CAPSTOCK
NOV_CASH
NOV_CONSUMABLE
NOV_CUSTOMS
NOV_DATA
NOV_DATBLNES
NOV_DVDS
NOV_EXHIBIT
NOV_PREIGHT
NOV_PREIGHT
                          A:BV120..A:BV120
                                                    Balance of cash on hand for November.
                          A:BV125..A:BV125
                                                    Original cost of consumable supplies on hand in November.
                          A:BV18..A:BV18
A:BS337..A:BS337
                                                    Customs expenses for November.
Copy of the data entry form for November.
                          A:BV344..A:BV417
A:BW66..A:BW66
                                                    The inputted for November and located in NOV_DATA. Dividends paid in November.
                          A:BV34..A:BV34
                                                    Exhibition expenses for November.
                          A:BV19..A:BV19
                                                    Freight expenses for November.
NOV FREIGHT
NOV FURNITURE
NOV GROSS
NOV INTAX
NOV INTEXP
NOV INTEXP
NOV INTEXP
NOV INTEXP
NOV ISSCAPSTE
NOV LONGDEBT
                          A:BV130..A:BV130
                                                    Original cost of office furniture owned at end of November.
                          A:BV293..A:BV293
                                                    The performance measure % Gross Margin on Sales for November.
                          A:BX50..A:BX50
                                                    Income tax expense for November.
                          A: BW11..A: BW11
                                                    Interest earned in November.
                          A:BV42..A:BV42
                                                    Interest expense in November.
Bnd of the month inventory for November.
                          A:BW24..A:BW24
                          A:BW248..A:BW248
                                                    Proceeds from issuing capital stock in November.
                          A:BW145..A:BW145
                                                    Amount of long term debt at end of November.
NOV LONDDEBT
NOV MARGIN
NOV MONTH
NOV NOTESPAY
NOV OCT
NOV OFFEQUIP
NOV OTHER
NOV PREEXP
NOV PURCHASES
NOV PRTHINN
                                                   The performance measure Margin % for November. Date used in heading of income statement for November.
                          A:BV287..A:BV287
                          A:BU3..A:BU3
                                                   Balance of notes payable for November.
Contains labels for Nov-Oct plots.
Original cost of office equipment owned at end of November.
Other expenses not listed for November.
                          A:BV142..A:BV142
                          C:B513..C:M513
                          A:BV129..A:BV129
                          A:BV43..A:BV43
                          A:BV123..A:BV123
A:BV17..A:BV17
                                                    Balance of prepaid expenses for November.
Cost of purchases for inventory in November.
NOV_PURCHASES
NOV_RBTURN
NOV_SALARIBS
NOV_SALES
NOV_SELLEXP
NOV_SBHINARS
NOV_SHORTBORROW
NOV_SHORTBEBT
NOV_STAX
NOV_TAXPAY
NOV_TRAVEL
NOV_UTILITIES
OCTOBER
                          A:BV289..A:BV289
                                                    The performance measure Return on Capital for November.
                          A:BV39..A:BV39
                                                    Office salaries paid in November.
                          A:BW7..A:BW7
                                                    Revenue from sales for November.
                          A:BW31..A:BW31
                                                    Expenses associated with selling in November.
                                                    Expenses associated with seminars in November. Proceeds from short term borrowing in November.
                          A:BV35..A:BV35
A:BW247..A:BW247
                          A:BW250..A:BW250
                                                    Payment made on short term debt in November.
                                                    Sales tax paid on inventory purchsed in November.
Balance of taxes payable for November.
Travel expenses for November.
                          A:BW8..A:BW8
                          A:BV141..A:BV141
                          A:BV41..A:BV41
                          A:BV40..A:BV40
                                                    Utilities expenses for November.
OCTOBER
                          A:BL1..A:BQ304
                                                    Contains the financial reports for October.
OCT_ACCTPAY
                          A:B0140..A:B0140
                                                    Balance of accounts payable for October.
OCT_ACCTRCVBL
OCT_ACCTRCVBL
OCT_ADVERTISE
OCT_ASSET
OCT_BANE
OCT_BUILDING
OCT_CAPSTOCE
OCT_CASH
OCT_CONSUMABLE
OCT_CUSTOMS
OCT_DATA
OCT_DATA
OCT_DATBLNES
OCT_DATBLNES
OCT_EXHIBIT
OCT_FREIGHT
OCT_FURNITURE
OCT_GROSS
OCT_INTAX
OCT_INTEREST
                          A:B0122..A:B0122
                                                    Balance of accounts receivable for October.
                          A:B033..A:B033
                                                    Advertising expenses for October.
                          A: B0291 . . A: B0291
                                                    The performance measure Asset Turnover Ratio for October.
                                                    Balance in bank accounts for October.
Original cost of buildings owned at end of October.
                          A:B0121..A:B0121
                          A: B0131..A: B0131
                                                   Original cost of capital stock owned at end of October. Balance of cash on hand for October.
                          A:B0147..A:B0147
                          A:B0120..A:B0120
                          A:B0125..A:B0125
A:B018..A:B018
                                                   Original cost of consumable supplies on hand in October.
                                                    Customs expenses for October.
                          A:BL337..A:BL337
                                                    Copy of the data entry form for October.
                          A:B0344..A:B0417
                                                    The data inputted for October and located in OCT DATA.
                          A:BP66..A:BP66
                                                    Dividends paid in October.
                          A: B034 . . A: B034
                                                    Exhibition expenses for October.
                                                    Freight expenses for October.
Original cost of office furniture owned at end of October.
                          A:B019..A:B019
                          A:B0130..A:B0130
                                                    The performance measure % Gross Margin on Sales for October.
                          A:B0293..A:B0293
                                                    Income tax expense for October.
                          A:BQ50..A:BQ50
OCT INTEREST
                          A:BP11..A:BP11
                                                    Interest earned in October.
```

```
OCT_INTEXP
OCT_INVENTORY
OCT_ISSCAPSTE
OCT_LONGDEBT
OCT_MARGIN
OCT_MONTH
OCT_HOTESPAY
OCT_OFFROMUP
                            A:B042..A:B042
                                                       Interest expense in October.
                            A:BP24..A:BP24
                                                       Bnd of the month inventory for October.
                            A:BP248..A:BP248
A:BP145..A:BP145
                                                       Proceeds from issuing capital stock in October.
                                                       Amount of long term debt at end of October.
The performance measure Margin % for October.
Date used in heading of income statement for October.
                            A:B0287..A:B0287
                            A:BN3..A:BN3
                            A:B0142..A:B0142
                                                       Balance of notes payable for October.
                                                       Original cost of office equipment owned at end of October. Other expenses not list for October.
OCT_OFFEQUIP
OCT_OTHER
OCT_PREEXP
OCT_PREEXP
OCT_RETURN
OCT_SALARIES
OCT_SALES
OCT_SELLEIP
OCT_SELLEIP
OCT_SENINARS
OCT_SEP
OCT_SHORTBORROW
OCT_SHORTDEBT
OCT_TAXPAY
OCT_TRAVEL
OCT_UTILITIES
PLAČE_DATA1
 OCT_OFFEQUIP
                            A:B0129..A:B0129
                            A: BO43..A: BO43
                            A:B0123..A:B0123
                                                       Balance of prepaid expenses for October.
                           A:B017..A:B017
A:B0289..A:B0289
                                                       Cost of purchases for inventory in October.
                                                       The performance measure Return on Capital for October.
                           A:B039..A:B039
A:BP7..A:BP7
A:BP31..A:BP31
A:B035..A:B035
                                                       Office salaries paid in October.
Revenue from sales for October.
Expenses associated with selling in October.
                                                       Expenses associated with seminars in October.
                           C:B511..C:M511
A:BP247..A:BP247
                                                       Contains labels for Oct-Sep plots.
Proceeds from short term borrowing in October.
                            A:BP250..A:BP250
                                                       Payment made on short term debt in October
                            A:BP8..A:BP8
                                                       Sales tax paid on inventory purchased in October.
                            A:B0141..A:B0141
                                                       Balance of taxes payable for October.
                            A:B041..A:B041
                                                       Travel expenses for October.
                            A:B040..A:B040
                                                       Utilities expenses for October.
 PLACE_DATA1
                            C:B42..C:G42
                                                       Menu for copying data from data entry form to financial reports for
 PLACE_DATA2
                            C: B86..C: G86
                                                       Menu for copying data from data entry form to financial reports fo.
                                                      Menu for selecting which performance measure to plot. 
Menu for printing financial reports for Jan-Jun. 
Menu for printing reports for Jul-Dec. 
Lower left hand corner of QUIT_MSG.
                            C:B268..C:B268
 PLOTS
PRINT_REPORTS1
PRINT_REPORTS2
QUIT_CORNER
QUIT_NSG
                           C: B258..C: B258
C: B263..C: B263
                            C:A633..C:A633
                                                       Screen which warns user of dangers of quitting.
                            C: A614..C: D633
                            C:B238..C:B238
 REPORTS
                                                       Menu for selecting whether to view or print financial reports.
                           C: B534..C: B534
                                                       Macro which is used to restart the application after leaving macro.
RESTART
                            C: B291..C: B291
 SCRATCH_A1
                                                       First cell in range SCRATCH_ARBA.
                                                      Tenth cell in range SCRATCH AREA.
Eleventh cell in range SCRATCH AREA.
Twelveth cell in range SCRATCH AREA.
Second cell in range SCRATCH AREA.
Third cell in range SCRATCH AREA.
SCRATCH_A10
                           C: K291..C: K291
SCRATCH A11
SCRATCH A12
SCRATCH A2
SCRATCH A3
                            C:L291..C:L291
                           C: M291..C: M291
                            C: C291 . . C: C291
                           C: D291..C: D291
                                                       Fourth cell in range SCRATCH ARBA.
Fifth cell in range SCRATCH_ARBA.
 SCRATCH_A4
                            C: E291..C: E291
SCRATCH_A5
                           C: F291..C: F291
 SCRATCH A6
                            C: G291..C: G291
                                                       Sixth cell in range SCRATCB ARBA.
                           C: H291..C: H291
SCRATCH A 7
                                                       Seventh cell in range SCRATCH_ARBA.
                            C: [291..C: [291
                                                       Bighth cell in range SCRATCB_ARBA.
 SCRATCH_A8
                           C: J291..C: J291
                                                       Nineth cell in range SCRATCH_AREA.
SCRATCH A9
                                                       Used for arranging data in appropriate order for plotting. Screen used after opening screen.
                            C: B291..C: M291
 SCRATCB_AREA
 SCREEN
                            C: P1..C: P1
                                                       Lower left corner of the range screen.
Contains the financial reports for September.
 SCREEN CORNER
                            C: P20..C: P20
SEPTEMBER
                            A:BE1..A:BJ304
SEP_ACCTPAY
SEP_ACCTRCVBL
                                                       Balance of accounts payable for September.
Balance of accounts receivable for September.
                            A:BB140..A:BH140
                            A:BH122..A:BB122
SEP_ACCTRCVBL
SEP_ADVERTISE
SEP_ASSET
SEP_BANK
SEP_BUILDING
SEP_CAPSTOCK
SEP_CASH
SEP_CONSUMABLE
SEP_CUSTOMS
SEP_DATA
                            A:BH33..A:BB33
                                                       Advertising expenses for September.
                            A:BH291..A:BH291
                                                       The performance measure Asset Turnover Ratio for September.
                            C:B509..C:M509
                                                       Contains labels for Sep-Aug plots.
                            A:BH121..A:BH121
                                                       Balance in bank accounts for September.
                                                      Original cost of buildings owned at end of September.
Original cost of capital stock owned at end of September.
Balance of cash on hand for September.
Original cost of consumable supplies on hand in September.
                            A:BB131..A:BH131
                            A:BB147..A:BH147
                           A:BB120..A:BB120
A:BB125..A:BB125
                            A:BB18..A:BH18
                                                       Customs expenses for September.
                           A:BE337..A:BE337
                                                       Copy of the data entry form for September.
SEP_DATBLNES
SEP_DVDS
SEP_EXHIBIT
SEP_FREIGHT
                            A:BH344..A:BH417
                                                       The data inputted for September and located in SEP_DATA.
                           A:BI66..A:BI66
                                                       Dividends paid in September.
                           A:BH34..A:BH34
                                                       Exhibition expenses for September.
                           A:BH19..A:BH19
                                                       Freight expenses for September.
```

```
SBP_FURNITURB
SBP_GROSS
SBP_INTAX
                       A:BB130..A:BB130
                                              Original cost of office furniture owned at end of September.
                       A:BH293..A:BH293
                                              The performance measure % Gross Margin on Sales for September. Income tax expense for September.
                       A:BJ50..A:BJ50
SEP_INTEREST
SEP_INTEXP
                       A:BI11..A:BI11
                                              Interest earned in September.
                       A:BB42..A:BH42
                                              Interest expense in September.
SEP_INTEXP
SEP_INVENTORY
SEP_ISSCAPSTE
SEP_LONGDEBT
SEP_MARGIN
SEP_MONTH
SEP_NOTESPAY
SEP_OFFEQUIP
SEP_OTHER
SEP_PREEXP
SEP_PREEXP
SEP_PRETTURN
                       A:BI24..A:BI24
                                              Bnd of the month inventory for September.
                       A:BI248..A:BI248
                                              Proceeds from issuing capital stock in September.
                       A:BI145..A:BI145
A:BB287..A:BH287
                                              Amount of long term debt at end of September.
                                              The performance measure Margin % for September.
Date used in heading of income statement for September.
Balance of notes payable for September.
                       A:BG3..A:BG3
A:BB142..A:BH142
                       A:BH129..A:BH129
                                              Original cost of office equipment owned at end of September.
                       A:BH43..A:BH43
                                              Other expenses not listed for September.
                       A:BH123..A:BH123
A:BH17..A:BH1?
                                              Balance of prepaid expenses for September Cost of purchases for inventory in September.
SBP_PURCHASES
SBP_RETURN
SEP_SALARIES
SEP_SALES
SBP_SELLEXP
                       A:BH289..A:BH289
                                              The performance measure Return on Capital for September.
                                              Office salaries paid in September.
                       A:BB39..A:BB39
                       A:BI7..A:BI7
A:BI31..A:BI31
                                              Revenue from sales for September.
                                              Expenses associated with selling in September.
SBP_SBMINARS
                                              Expenses associated with seminars in September.
                       A:BH35..A:BH35
SBP_SHORTBORROW
                       A:BI247..A:BI247
                                              Proceeds from short term borrowing in September.
SEP SHORTDEBT
SEP STAI
SEP TAIPAY
SEP TRAVEL
SEP UTILITIES
                       A:BI250..A:BI250
                                              Payment made on short term debt in September.
                       A:BI8..A:BI8
                                              Sales tax on inventory purchased in September.
                                              Balance of taxes payable for September.
                       A:BH141..A:BH141
                                              Travel expenses for September.
                       A:BB41..A:BB41
                       A:BH40..A:BH40
                                              Utilities expenses for September
UPDATE_DATA1
                       C:B140..C:B140
                                              Menu for updatting the data in the months Jan-Jun.
                                              Menu for updatting the data in the months Jul-Dec.
UPDATE DATA 2
                       C:B188..C:B188
VIBW_DATA1
                       C:B130..C:B130
                                              Menu for viewing the data inputted into the months Jan-Jun.
VIEW_DATA2
                       C:B135..C:B135
                                              Menu for viewing the data inputted into the months Jul-Dec.
                       C:B279..C:B279
VIEW_PLOT
                                              Menu for selecting which performance measure to plot.
VIEW REPORTS1
                       C:B249..C:B249
                                              Menu for viewing the financial reports for the months Jan-Jun.
VIEW_REPORTS2
                                              Menu for viewing the financial reports for the months Jul-Dec.
                       C:B254..C:B254
                       C:A638..C:A638
C:A657..C:A657
WARNING
                                              Screen which warns the user after updatting a month's data that hee Lower left hand corner of the range WARNING.
WARNING CORNER
                                              Auto loads the macro MAIN when the file is brought into Lotus. Equals the keystrokes ALT + M which execute the macro MAIN.
                       C:B3..C:B3
10
                       C:B5..C:B5
/#
                       C:B531..C:B531
                                              Equals the keystrokes ALT + R which execute the macro RESTART.
\R
```

## LIST OF REFERENCES

- 1. Webster's Ninth New Collegiate Dictionary, Merriam-Webster Inc., 1985.
- 2. Meigs, R.F. and Meigs, W.B., Financial Accounting, McGraw-Hill Inc., 1989.
- 3. Garrison, R.H., *Managerial Accounting*, Business Publications Inc., 1988.
- 4. Whitten, J.L., Bentley, L.D., and Barlow, V.M., Systems Analysis & Design Methods, Richard D. Irwin Inc., 1989.

## BIBLIOGRAPHY

Donie, E.M., 1-2-3 Release 3 Business Applications, Que Corporation, 1989.

Dyrud, A., Posner, J., and Zuckerman, M., The Lotus Guide to 1-2-3 Advanced Macro Commands, Addison-Wesley Publishing Company Inc., 1987.

Jorgensen, C., Mastering 1-2-3 Release 3, SYBEX Inc., 1989.

Lunsford, E.M., Macros, Menus, and Miracles for Lotus 1-2-3, John Wiley & Sons Inc., 1990.

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